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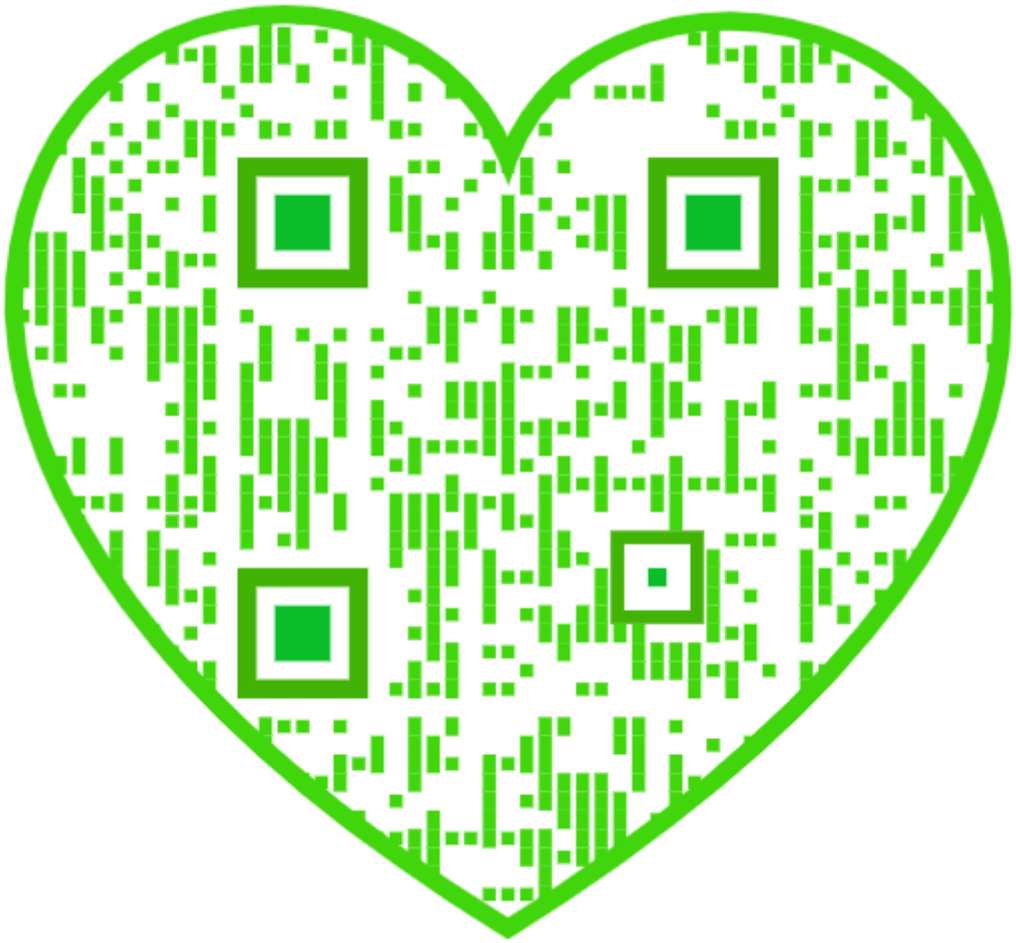

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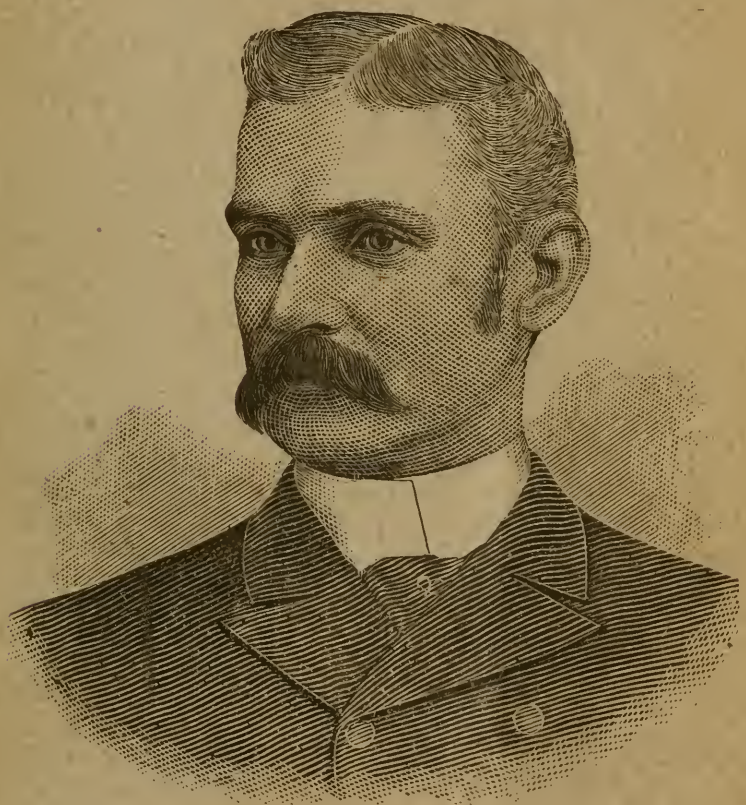

WRITTEN BY
G. R. HOLLINGSWORTH
Hagerstown, Md.

Will Make You $1,000

A Guide to the

METHODS of HANDLING HORSES,

+ AND + THE +

Treatment of their Diseases.

DISEASES OF CATTLE.

Wonderful Discovery for Hogs

By G. R. HOLLINGSWORTH,
Hagerstown, Md.

1892.
GLOBE JOB ROOMS PRINT,
HAGERSTOWN, MD.

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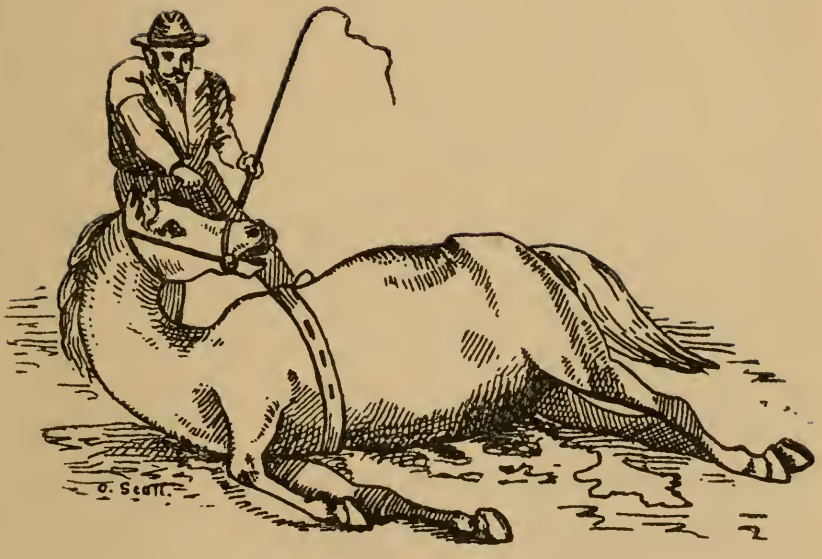
Introduction.

It is highly important for a man wishing to handle horses and other animals skillfully that he should possess nerve, energy, and above all be able to control his temper, remembering that he has all the strong mental faculties, while the Horse can think of but one thing at a time. Should you lose your temper, whip, slash and halloo, making it impossible for the horse's understanding, while the horse is now excited, also the teacher, you forget to pat or encourage him, when does right and your horse then becomes man shy, which is very hard to overcome again. Be strong, firm and elastic with the reins and appliances you are using, never allowing the animal to know his strength. When horses have their own way they have very little reasoning power. A horse has some strong powers of recollection and in some instances they are stronger than man, so much so that they will take advantage in the field and stable, harness and saddle.

Man as a high being over the horse and knowing the strength, and especially how they differ

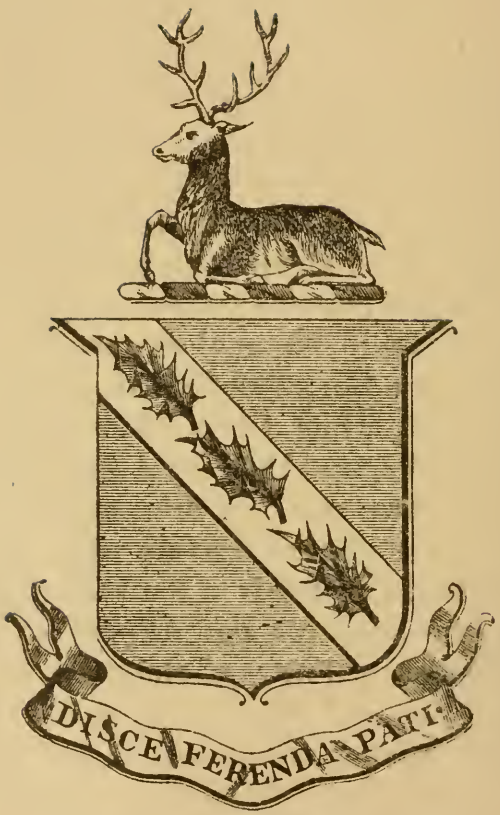

O. Scott

in dispositions, is not excusable for taking risks in giving the horse more freedom than belongs to an animal like the horse with his great strength in comparison to man. When a savage horse opens battle with heels or mouth, a man unless on his watch and guard is nothing more than a mouse in the cage of a lion.

Intending to make this a Pocket Manual and not a history, I do not think it expedient at this place to illustrate what may follow in its pages, as may be observed by the reader when his eye shall greet the letters that he will find there, from the standard bearers of this country. Having spent my entire life with farmers and horse owners, I do not want for language to express to them in this book anything but what will be of vast importance in every-day life, and not take up their valuable time with anything too complicated, that they will not at once be able to diagnose and thoroughly understand. My ointments, and my entire medicine department and theory are from a life-long study, and it affords me pleasure to put them before the public, as it always gave me pleasure to study and improve in every way, and adopt all methods which would afford the greatest success and lead to speedy victory.

I therefore with 20 years' association with horses consider all of them unsafe when trusted too far They are never too gentle or well broken not to

commit great damage to man's life. In every-day life we see and read of accidents, of horses that have been in use 15 to 20 years; therefore, trust them not with old harness and defective, half broken down wagons or machines, for when once they get away, old or young, they sometimes never get over it, and only wait for an opportunity to do so again. I do not intend in this work to write a history, but simply to give some facts or, as it were, to build a fence of protection around the owners and handlers of horses which will protect them from damage to themselves or their horses. They can put up the inside fences as they see best, just as persons buying a piece of land can work on the inside at their own pleasure, but when they cross the outer line, they do so at their own risk Now when I tell what risks you may take with safety, and then you take greater, it is then at your own risk you are making the venture. It is not a sign of bravery when a man gets in front of a circular saw or a steam engine when they are in motion for the purpose of stopping them, but he should always endeavor to have the steam or power on his own side, for the public only condemns such horsemen. It is only a matter of time when they shall be expelled by the greater power of the horse.



History of My Life.

I was born in 1856, on the celebrated stock farm "Willow Grove" known as the Hollingsworth farm,

near Winchester, Virginia. My father, Isaac Hollingsworth, was born and raised on the same farm, his father having been married twice. He was the only child, his father dying when he was quite small; he was educated at Dickinson College, located at Carlisle, Pa., from which he graduated when he was 19 years of age. He then returned to the farm and stocked it with the most choice stock of those days, making a specialty of high grade Saddle and Driving Horses and the farm was thoroughly stocked with all the improved stock of the day; and not only was he noted for the fine stock he possessed, but he seemed to be born with that love for the horse, that he soon became a center of attraction. He was considered the most graceful horseback rider to be found anywhere in those days. His stock was much sought after and admired at fairs. I often wondered when a boy, growing up if my father could love a horse more than I. I was the oldest son and when not at school my father took a delight when I was only ten years old in having me in the library reading aloud, and being unable to pronounce many words correctly would cause him to laugh and ridicule me, until we both would get through the chapter.

When I was 13 years old I was able to look after all stock and administer to any ordinary wound and at fairs or other places if a horse would take colic was able to tell the groom what

he should give him. In reference to my education, I studied under the guidance of a private tutor at home until I was 13, when I was sent to the Academy in Winchester, where I remained until I was 17 years of age. Shortly after I returned home my father died. I remained home one year, when the estate being settled up I then left on a prospecting tour to Texas. Having visited the most important parts of the state, and awhile on the Red River, I then returned to Winchester, my native home. At that time Cumberland, Maryland, was then booming and liking the town I bought an old livery man out, and conducted the livery business and the treatment of stock, in which I was most successful, as the reader will see from Mr. Fred Mertin's letter, who owned and worked upon the C. & O. Canal over 100 head of horses and mules, all of which were wanting treatment and I attended during my many years there. From Cumberland I removed to Hagerstown, Maryland, and have conducted a sale stable, shipping horses to the city, spring and fall, and in the meantime have enjoyed a large practice in which I have been successful, and in which I am endorsed by the leading people of this county.

Some three years ago the great Hagerstown Fair Association offered a handsome prize, valued at $50.00, to the most graceful gentleman rider. In this contest I was most successful,

having received the highest mark every day, the Society requiring the last day each rider to keep his horse in a trot.

Having made a life-time study of the horse, being engaged in nothing else, and having owned fine horses, stimulated me more and more, to be able to administer to their wants, and to be able to take care of the high dollar which was invested.

Much can be learned by close observation and attention. As so many changes take place when the animal is alone which go unnoticed, untiring and faithful attention, and giving medicines regularly, never allowing the disease of whatever character to go unnoticed, by giving one dose of medicine and then waiting till the next morning to see the sick animal, but give him the same attention as you would a sick person, always remembering to see that everything is comfortable around him.

Never give injurious medicine, unless you are acquainted with what you are doing. What is once put down his throat is anchored until nature can vacate it through the horse. He cannot vomit, therefore, it may do harm before leaving his stomach. Never did a shut mouth ever tell lies; so, after all; close attention and making close observations after death is the only means we have to be able to treat dumb animals.

Hoping this book may always have a green spot in your memory. I remain

Yours Respectfully,

G. R. HOLLINGSWORTH.

Testimonials.

MAYOR'S OFFICE, HAGERSTOWN, MD., Feb. 13, 1892.

To all whom it may concern:

This is to certify that I have known Dr. G. R. Hollingsworth for several years, and from my knowledge of him and the information obtained through persons with whom I am well acquainted, it gives me great pleasure to recommend him to all who may need his services, as one who has a thorough knowledge of and experience with the handling and treatment of horses.

REINHOLD J. HALM, Mayor.

MECHANICS' LOAN AND SAVINGS INSTITUTE,
HAGERSTOWN, MD., Feb. 16, 1892.

Dr. G. R. Ho lingsworth, Hagerstown, Maryland.

DEAR SIR:

Your handling of several horses for me and their treatment in a veterinary capacity, has been highly satisfactory and proves to my mind that your superior skill and ability as a thorough horseman cannot be gainsaid.

Respectfully,
GEORGE E. STOVER,
Assistant Treasurer.

HAGERSTOWN, MD., Feb. 17, 1892.

To whom it may concern:

Dr. G. R. Hollingsworth has been a patron of my store for the past eight years. I have always found him to be

a prompt, efficient and truthful gentleman. During these years he has bought largely of drugs and medicine, and has always shown a knowledge in his profession fully sustained by his success in veterinary practice. I heartily recommend him. Very respectfully,

D. C. AUGHINBAUGH.

ADAMS EXPRESS COMPANY,
PENNSYLVANIA DIVISION,
OFFICE OF ASSISTANT SUPERINTENDENT.
HARRISBURG, PA., Feb. 6, 1892.

G. R. Hollingsworth, Esq., Veterinary Surgeon, Hagerstown, Md.

DEAR SIR:

Having purchased at different times a number of horses from you for use of Adams Express Company, and being obliged frequently to engage you in a veterinary capacity, I take great pleasure in saying that the stock, as also your services, always gave entire satisfaction; therefore, I cheerfully recommend your knowledge, ability and experience in the handling and treatment of horses, to such people as may become your patrons. Wishing you success in your new departure, I am

Very respectfully,
G. H. MOOREHOUSE, Asst. Superintendent.

ELLWOOD STOCK FARM.
HAGERSTOWN, MD., Feb. 12, 1892.

Dr. G. R. Hollingsworth, Hagerstown, Md.

DEAR SIR:

Having purchased several horses for myself and friends and have frequently engaged you in a veterinary capacity, the stock and also your services have given satisfaction. Therefore I cheerfully recommend your knowledge, ability and experience in the handling and treatment of horses to such people as may become your patrons.

Very truly, JNO. N. RIPPLE,

MERIT, ABILITY AND FAITHFULNESS.

EDITORS NEWS:—Merit, ability and faithfulness are most commendable and they are traits not often found, but they are exceptions to all rules, and one has been found by the undersigned in Dr. G. R. Hollingsworth, veterinary surgeon, of this place.

Desiring to visit Berkeley Springs, by driving from Washington City, D. C. after a very pleasant and successful drive from there to this place. which was reached on Monday, 27th inst., our horse was suddenly taken sick, and on inquiring for a veterinary surgeon very fortunately I was directed to the Doctor, and his indefatigable services, night and day, since, coupled with the surgical ability which he has shown in the case of the afflicted animal, has so commended him to me that I take this occasion through your paper to recommend him to any one having a sick or crippled horse.

I have no axe to grind in this, being a resident of Washington City, D. C., and only do an act of justice to the doctor and a kindness to my fellow man when similarly environed. Hagerstown *News*, July, 1891.

SMITH THOMPSON,
1829 F St., N. W.,
Washington, D. C.

HAGERSTOWN EVENING GLOBE, Dec. 31, 1891:

Dr. G. R. Hollingsworth, this city, gave an interesting entertainment at the Winter brother's farm, near Wood Point yesterday afternoon with his new process of driving wild horses. He drove two Broncho horses in one hour and drove the last one he handled to this city in a spring wagon. Many persons witnessed the exhibition and pronounced the system a success.

EVENING WORLD OF ROANOKE, VA., NOV. 27, 1890:

Dr. G. R. Hollingsworth, of Hagerstown, Md., arrived here this morning with a carload of Maryland horses to

be placed on this market. They will be on sale at Dyer Brothers livery stables on Jefferson street. Among the horses is General Hancock, a chestnut stallion rated at 2:30 and weighs 1,200 pounds. He is beyond question one of the handsomest ever seen in this city and has no superior for style or beauty.

A pair of Cleveland bays for carriage use are among the lot and attract marked attention. A pair of fine thoroughly broken saddle horses are also shown as well as a fine coupe horse specially desirable for family use. The remainder are adapted to general uses and altogether this presents an excellent opportunity to secure first-class stock.

They will be offered at public sale on tomorrow (Friday) afternoon at 2 o'clock, at the stables of Dyer Brothers, and in the interim will be open to private sale.

CUMBERLAND, MD., Feb. 29, 1884.

DR. G. R. HOLLINGSWORTH, Hagerstown, Md.

DEAR SIR:

Yours of the 28th inst., at hand, asking for the use of my name before the public in regard to your treatment of diseased stock. Permit me to say that you have treated horses and mules for me for nearly all kind of diseases, and especially cases of bone spavin, in all of which you have been most successful in saving my stock, which would otherwise have been a total loss. I therefore cheerfully recommend you to the public's consideration, knowing your ability and skillful operations in treating my stock. Very truly yours, F. MERTINS.

Mr. Mertins' letter I treasured highly for he owned over 100 head of stock, horses and mules, which was used on the canal and required my attention every day for more than six years.

CUMBERLAND, MD., Feb. 26, 1884.

DR. G. R. HOLLINGSWORTH, Hagerstown, Md.

DEAR SIR :

Your favor of the 25th inst. duly at hand, asking me to allow you the use of my name before the public in reference to your skill and ability in the treatment of sick or blemished horses, mules and cattle. I will say that it gives me great pleasure to say to all whom it may concern, that I have the utmost confidence in your handling and treatment of sick and diseased stock, from services you have rendered me and from what I have seen in other cases not my own. I have been personally acquainted with you for years, and most gladly recommend you to the people at large. Yours respectfully,

HANSON WILLISON.

HAGERSTOWN, MD., March 1, 1884.

We are personally acquainted with Mr. Hanson Willison, and will endorse his statement of Dr. G. R. Hollingsworth.

LEWIS G. STANHOPE,
JUDGE A. K. SYESTER,
B. A. GARLINGER,

THE BALDWIN,
J. E THOMAS, Prop.
HAGERSTOWN, MD., Feb. 17, 1892.

To whom it may concern:

I have known Dr. G. R. Hollingsworth for the past 8 years and during that time have seen him in the pursuit of his profession, and consider him one of the most skillful horsemen and scientific veterinary surgeons that I ever met. He has handled and broken unruly and vicious horses for me, which I subsequently handled with ease, and drove with safety. In fact I regard him as a thorough born horseman and absolute master of his professional business and cheerfully recommend his services to the public. Very truly, J. E. THOMAS.

(From the Hagerstown Mail, Feb. 8, 1892.)

At the Mayfield Stock Farm of Mr. A. M. Christie, near this city, there was a fine yearling colt by Alchemist, out of Miss Innis, by Happy Medium, second dam by Belmont, that could not be handled at all. He was an obstinate and vicious little beast. On Saturday, Mr. Christie employed Dr. Hollingsworth to break and handle the animal, which had spurned all approach, and presented flying heels to every attempt to touch him. The doctor, whose picture appears above, at once began his course of treatment, and as if by magic, subdued the spirited little animal. Within an hour, Mr. Christie was able to lead him around, and handle him with perfect freedom. Mr. Christie's note to the doctor is as follows:

"I am greatly pleased with your system of handling fractious horses and colts. It is so kind and gentle and yet so efficacious. It seems to be certain, sure and lasting, and I can heartily recommend Dr. Hollingsworth."

A. M. CHRISTIE.

Such a recommendation from a well-known breeder like Mr. Christie, is praise indeed.

How to Examine a Horse.

Never purchase a horse in the stable until you have first taken him out on the level soil, when you can take your time and let him have his head. Do not allow a whip to be used while you look at him. When the animal comes to the door to be brought out, you look at his eyes under the door. Having the back ground dark, you will be able to see his eyes more clearly. Now let him come out, stand in front, look at his front feet and see if they are the same size, then let your eye run up to his knees and see how many splints there may be on the outside as well as inside. All this time keep an eye on his head, now and then, to see if he is watching you, and you will be able to detect some knowledge of his sense. Some horses may be subject to fits and dumb, and much knowledge can be drawn by watching their heads how they stand and act.

Stoop down, looking through the front legs to hock, see that they are the same size, free of spavin and look through his hind legs for ruptures, and if castrated clean. Horse with a stud-looking neck

should be taken up to a mare. If you have any doubt about him not being cut clean, he will then act like a stud. They are dangerous to be with other horses or get loose in a stable. Now walk behind him, look over his rump, and see if his hips are both alike. Now step on each side, notice him breathe, and see if he ever had a rib broken, or had fistula; all this being done, take time on his mouth. See that his teeth do not bear any appearance of a cribber, and look far back in his mouth if an old animal, and see how his moalers look, then have a boy to run ahead of him, and see how he tracks, or goes lame, and carries his tail. Have the boy to get on his back, and run him one hundred yards from you and back as fast as he can go without injuring him, and now you can catch his wind. Always look close to a horse's hocks for they are liable to be injured in many cases, and so many blemishes appear on the hocks, as the strain is very great; also his ankles, look for warts in his ears, also examine his tail for they sometimes infest it, and cause grave trouble. Always try to drive a horse before you pay for him, unless you know your man and horse; even then you may not like him after you see him travel, for some animals look good one place and some another. If you are buying a double team then comes judgment and plenty of it, for one horse may be perfect and the other not

good and do not travel together. Any gentleman not being fully competent of examining a horse should get some one who can be thorough in all his doings throughout. You cannot take too much time in trying a single horse or a double team for family use, until you have been convinced they are safe and what you want. You can find horses, but not dear friends. I can only say, always be on your guard, look for habits good or bad. I think more than half the battle is a perfect eye. The safety and comfort depends on horses with perfect eyes, does not shy from mismanagement or having been abused. If allowed to stand without use in cold weather, he may look wild, and jump around and especially when anything comes up quickly behind him. Horses should have plenty of light. Anything from a cold or eye-running, the animal is unsound until cured. A horse losing one eye blemished both eyes out blemished. Horses do not all have feet alike, some much smaller than others, while some will contract sooner than others. Horses with mule-shaped feet will contract if not closely watched, if used and kept shod on hard roads when contracted; unsound flat foot will do for farm, but bad for a driver. Horses with corns which come on the inside, mostly unsound corns can appear soon. Therefore look before the money passes. Cracked in the feet either side or front blemished. When a horse has a bad case

of thrush, and his steps are short, and his feet drawn in at the heel he is unsound. Thrush is not unsound in a mild form. Ringbone above the feet unsound, cartilages at the top the coronet unsound, and best fit for farm use. Canker unsound, allow thrush to exist too long will produce canker, windgalls at the bottom of the cannon bone not large shows a great deal of use has been had out of the animal and especially if on the outside, and inside it is a blemish and not too great would not reject a good animal as a horse grows old, if not too large they go off. Splints not close to the knee, half way down the cannon bone not too large sound, curbs if not large does not interfere with him in the least sound. Spavin either bone or bog unsound swelled or capped nocks not large blemished, through pins not large showing only a windgall, out side leg sound. Grease unsound. Hitch in the back unsound. Horse tender in the front feet or sore and stumbles unsound. Heavy in the wind or rupture unsound. Heaves unsound. All colds and coughs unsound until cured. Sprung front knees unsound. A horse flighty and over rush of blood to the head unsound. A horse that has ever had poll-evil or fistula and properly cured not leaving bad effect blemished. Cribbing unsound. Surfeit unsound. Lampas blemished until scored with a knife.

I have tried to point out to you many defects,

and to have you on your guard; and notwithstanding, you will still go astray in buying if not careful. It is well to take a receipt for a horse bought to be sound, etc.

$150 00 HAGERSTOWN, MD., Jan. 1, 1892.

Received of Samuel R. Jones One Hundred and Fifty Dollars for one bay mare warranted sound free from vice. Six years old next spring quiet to drive, and true in all harness, and safe to ride.

A. C. BOWMAN.

HAGERSTOWN, MD., Jan. 6, 1892.

Received of Mrs. A. P. Colston, Ninety Dollars for one gray mare; sound except lower cap of hip being down; quiet to drive. A. L. STRITE.

The above mare will not allow any one to ride with safety, so it was left out *the receipt, also age and vice.*

A horse with a good barrel, and a place to carry his dinner, and not pot-gutted, should always have considerable the advantage in market over a horse with tucked flanks and small feeder. It is generally a good sign to go by, for unless he eats when at work he must go down in flesh and is more liable to get sick. His chances are better than those of any dainty animal.

If you live in a town or city and want to buy a driving horse, never purchase a colt, if you want to do much driving for they are apt to become unsound before you are aware, and then again colts are like children. They get sick and go through with colt distemper and get gouty when fed too much grain. They require like everything

else, exercise; but it should be in a moderate form and not many know a colt can be ruined both by over-feeding as well as by driving. Then they are not gentle for town use, they get full of play and like to give vent to their feelings by showing their hind feet sometimes; and, too, they chance to become frightened and they kick something behind them, and start to run, and kick for all they can.

Always watch that a dog never bites your colt or horse on his legs when driving, for some grave accidents have happened, and nothing will make a horse act worse than when badly frightened by a dog taking hold of his leg, for they do it quickly and bite hard, and then again some horses have very little idea of being very gentle.

At the best, a horse broad between the eyes, large nostrils, good eye, are generally good animals, and if a very heavy foretop inclined to be lazy.

Still all things differ when properly shown and handled; but, as a rule, much knowledge can be gained from close observations of a horse's head, when you once know where to look for things that denote faithfulness—ears, eyes, nostrils and shape of head—as I have explained.

We are liable to fall in love too easy with a horse, then allow ourselves to be persuaded by others too quickly to buy and then in a few days what a difference—all wrong; bought too quick;

lose possibly fifty dollars or more; try it again.

Now, anything you found wrong with this animal will be the first thing you look for when you go to purchase again.

I shall say little about telling the age of a horse, for when a horse gets past eight years old, three months make a big difference. So many differ in telling ages. All go by the appearance of the mouth, and any dealer can generally tell any horse up to ten and twelve years old; therefore, if a responsible person, his warranty covers this point.

In all large cities where large horse sales are made they do not guarantee the exact age of a horse. They may be called seven or eight. Then you must decide or take your best friend's judgment, or can you be able to risk your own opinion in the matter, and know what you want by looking over the animal, then buy and nine times out of ten you will use and be satisfied with him.

How to Tell Age of Horses.

This can only be understood by those who after years and experience in buying and handling horses that are expert, for horse's teeth differ very much. When a colt comes he has but first and second grinders, top and bottom, eight in all, four each above and below, and he may come without any, and in two or three days afterward he cuts the remaining teeth in succession, when two front nippers come top and bottom fairly through, when ten or eleven days old; when the next four come through he is one month old. When the third pair come through indicate eight months; these now last him until coming three years old, and are called milk teeth. When three years, he gets two center nippers having two full large teeth top and bottom; when four years old, the second pair of large teeth appear in order, one milk tooth at each side, top and bottom. When five years old, full mouth, all his milk teeth have been shed; some would think his milk teeth are fastened in the bone, but they are not; they only extend through the gums to the bone, and

are easily expelled. When he has a full mouth of teeth, forty in all, twelve nippers, four bridle teeth and twenty-four molars, six on top jaw, same on the lower, making twelve on each side. In the mare the tusks do not always make their appearance. Most cases when the mare gets up in years, the tusks are between the nippers and molars. Blind teeth or wolf teeth come close up to the first molar teeth on the upper jaw, sometimes they are very large and sometimes very small. I shall not enter into the long argument about blind teeth. Many farmers will not rest a day if they know a colt has blind teeth until they are taken out. I will say you run no risk in taking them out, and you have your mind relieved. This custom has been handed down from ages. I have seen colts that were weeping from the eyes, and after pulling the teeth they got better. So the proof of the matter is a test. Many horsemen go by the cups in the nippers in the lower jaw and use them to tell up to ten years. Horse six years old looses cups in center teeth on lower jaw, seven years old next almost gone, so on until nine when very little cup can be seen on the end teeth. The teeth commence to shrink and by the time another year comes around, his teeth get sharp up to the gums, each year grow long and so on as years roll by, it then takes general appearance to tell the age, by those that have watched it closely, then all miss some-

times for some dealers take spirits salts and can wash every line and clean pretty and white, then again all corners can be taken down even, making a pretty set of teeth, then again by taking a sharp awl and drilling cups almost as natural as ever; then take a stick of caustic and put a little in the cups already made will turn them black, and last a year or more and after standing over night, if done by an expert, it takes one quite skilled to detect it. Many four year old horses pass for five, some people only look for milk teeth and seeing them gone, having been pulled out to mislead the buyer, he never stops to count the front teeth, and taking a glance at the teeth goes on dealing and thinks he has a good five-year old horse ready for work. I have seen old horses sixteen years old with a mouth not over nine years old, but this is seldom seen unless he has been in the dental chair. Horses have decayed teeth, and sometimes have aching teeth like people, and refuse grain and leave it in the trough. In this case have them extracted, and with the improved instruments it can be done almost as easy as man's teeth. Bad teeth will cause the horse to slobber at the mouth, and in some cases a bad odor, and when colts get three years old and commence to loose their milk teeth and should some not fall out and the big teeth are coming crooked, pull out milk teeth with forceps.

How to Handle Horses.

Commence the very minute you lay your eyes on a colt. When you can get your hands on it, pat him on the head and convince it you are a friend. All little colts, when they first come, are willing to walk up to every object to make it out. If allowed to run at large all the summer and are never put in the barn, they get very wild. If well fed, it will take more work in the fall when you go to wean them, but if you don't do anything with them until six months old, be sure and break them to halters and lead and get gentle for they will not be so big and heavy and a man can handle them. They will not be so ugly afterward and they will know when you take hold of them that you are their masters, and they will not be hard to use in harness or saddle when they have never become man-shy.

If allowed to run until grown and you go to handle them take no chances and be ready for no bad breaks; that is, fix for them so you will be able to stop them from any bad move they may make, so that you do not get crippled or allow

them to get frightened, which will take you double the time to accomplish your work.

Many horses are ugly to shoe. Accustom your colt to let you handle his front feet by picking them up in the stable for they get used to the one that feeds them, and will allow you many privileges.

Remember, never be careless, and try and do too much, for while you have a dozen colts, you may have one or more devils in the lot that you have got to use differently. It may have bred after the mother or sire, and sometimes they even go back.

Never give colts or horses too much strap when you are leading. They can hurt you very easily.

Be careful not to stand in front of any animal that pulls back in the stable, for should he fall back and not break loose, then jump up in the stall and hit you, you might be killed or ruined for life.

They pull until they are almost blind with pain and they sometimes throw themselves or fall from being heavy about the brain, the halter pulling on top of the head over the brain.

When stock is tied do it right, for one animal to get loose in a stable can ruin many a fine animal. It is just as important to be watchful of tying stock as it is to speak to them when

entering the stable and stall. Always try to catch a horse's eye before going to his stall, never go into strange stall and among strange horses until you can see for yourself that they are not ugly or biters, or ask the owner or stable man.

A horse will sometimes allow you to come in his stall, and when close to his head, turn on you and try to squeeze you, or kick, or run back, then jump up in the stall, and catch you. Some horses are very ugly in pasture, will allow you to get close to them then wheel and kick you in the twinkling of an eye.

I don't want to take up so much time in trying to learn the young American boys to be ever watchful, but having gone all over this ground, I feel it my duty to give all ideas that may add to the safety of lives.

Never try to open a horse's mouth while fastened in a stall. Always unfasten the animal first. Then should he fall back no damage will be done.

When you go from home and either drive a young horse or one you have not owned long, and tie him in some place where you do not unhitch him and stable your horse, you had better unfasten him from your wagon or buggy even if it does take a little time. You may save your buggy or your horse by so doing, for you don't know but that he may pull back or even know

how to slip his bridle or be smart enough to untie himself. Then damage and loss may follow.

Avoid being out late at night with unsafe animals. Use daylight and take something safe when you know you will have darkness to contend with.

Never risk a lady behind an unsafe horse, until you are certain you understand its disposition, for once a lady is shocked by a runaway or kicking horse she hardly ever gets over it. You may feel you can handle any kind of a horse, but you will sometimes chance to get the wrong one, if you handle many.

Therefore, be ever watchful and you will never regret it when you grow old.

Always learn a horse to drive with single harness on before you ever hitch him singly. Learn him to turn and to go, and stop when you give the word. This is so important.

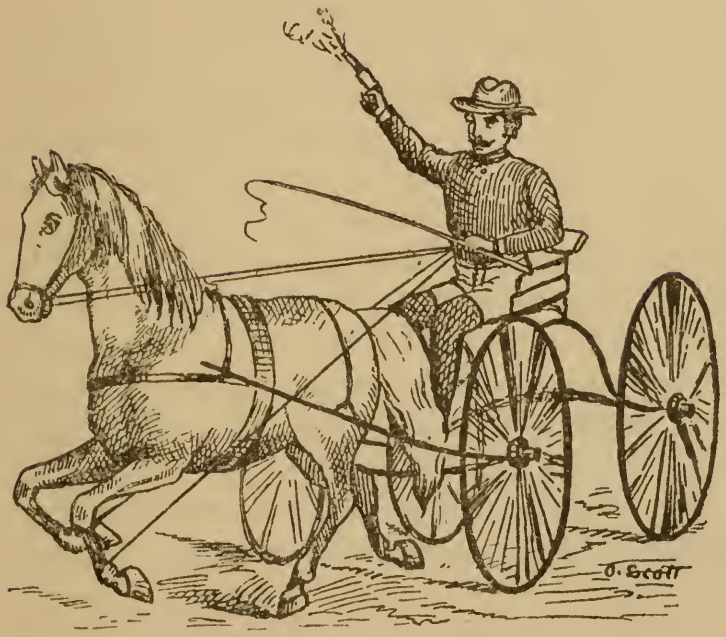
Never break a colt in a rush. When you chance to get a bad one, use all appliances laid down in my book and you will come close to being able to achieve the victory and not get hurt.

When you have a bad horse use him off wheel or some place where he can do no damage. Never allow yourself to take the burden off some one who has a bad horse until you first have the proper appliances to handle him with, even if you have to wait another day to arrange for the

matter, for if you don't you will ruin the horse, or he will get the best of you.

"A stitch in time saves nine," always consider, the first time you give a horse his first lesson. You should have everything right, and if all goes well, you may consider you have got him on a straight way to become a useful animal.

Breaking and Handling Horses.



The above cut shows how to fix for a bad kicker or a runaway and can be used on one taking the studs, or in using him to become familiar with steam, top wagons, or any object at which he will frighten, or if you want to shoot behind him.

Never whip a horse unless you are certain you

are right. Having used all other means, then use your whip on his front knees and on the side of his nostrils. These are tender spots with the horse.

You will see the horse has on an extra large saddle, and under this is a ring. The rope runs down to a strap and a ring to his front foot, between the ankle and hoof back through the ring under his belly to the other foot. You can pull both, or one leg as the case may require. A rope, or any strap around the body will answer, and you can use your regular driving harness, and not get them torn. Use something on his knees, if on a hard or stony surface, so if you pull him down, you will not bark them. This will take the starch out of him and you will soon learn how to have a well broken colt, and have it done with your own force and not have to spend money with others and then not get satisfaction.

Always be in a good humor when handling a horse, and you will save many drops of sweat and thousands of hard strains upon your nerves and loss of temper.

If your horse kicks in the plow and harrow, use this loop on both legs, and have him on the outside, and have a man to go several rounds. and every time you turn a corner and he kicks bring him on his knees. He will soon stop, and do his work to Queen's taste.

Never accustom any horse in driving to jerking

at his mouth to make him travel. Speak to him and at the same time use the whip, and at all times let him know you have a whip, and when you use it give him such a cut as he may deserve. Don't be touching at him all the time, for you will make him lazy.

Study your horse's mouth and use a bit that will suit best. Some horses have very tender mouths and will never drive good unless they have a bit to suit. Neither will a man carry his head right unless he has a collar around his neck that is comfortable.

Never shoe a young horse until his front feet get tender and he looks where he is putting his feet and picks a place like a boy when barefooted. When once you learn him this, shoe him, and in a few weeks take them off again. This cultivates a good saddle horse. If you want to have a long gaited driver, shoe before his feet get tender, and he gets to stepping short.

I believe in making farm horses, as well as others, to be careful, and not go falling over every little mole hill, for these days farmers use a fair size horse for all purposes. Therefore, to perform their duty, let him be sure-footed, for once he falls and cuts his knees it spoils the sale and many buyers will not buy one with such a blemish. Horses generally, when they run away, fall and hurt their knees.

If you want always to avoid all the misfortunes

you can never trust little boys to hold your horses at home or in the city, if it be only for ever so short a time.

Never leave children behind any horse without good aid. If you have to go from your carriage or wagon, take them out first and watch when gone.

Get out to open gates if alone. Rather than risk your horse, tie him; then go back and fasten the gate. If there is nothing handy to tie to, unfasten one side of your line at the bit, that will let you back to the gate and keep hold of your horse.

Never risk little children to go about your barn. Many accidents have happened by cattle or horses or hogs. If in the spring, your cows commence to calf and a child should enter the barnyard and perhaps you get her when not fresh and the party you get her from had no chilcren. She might run at the child and kill it, thinking she was protecting her calf. Mares will do the same thing.

If you have any old wells or cisterns about your place, be ever careful that they are kept in good order and closed, that nothing in roaming will walk on them and fall in. In summer, when water is scarce, I have seen some bad accidents to fine stock hunting water and breaking through,

and especially where stock is watered from wells.

I am often asked whether, when I am through breaking a horse, any person can drive him? I answer, no, for there are so many balky drivers who are not fit to take hold of a line, much less drive them. I have seen teams, four and six horses, completely spoiled in slashing the whip and keeping the team excited until they would straighten a trace and when they did, would want to go at it in a full run.

A great many take up a young horse in the field, and before gentling him and getting him in shape, hitch him to a buggy. Not being familiar with the rattle and bustle, he frightens and the shock to his nervous system is so great that it will require many lessons to overcome the fright.

After you have once gained the confidence of a horse, when you speak to him he will readily understand you are his friend.

A horse man-shy takes a long time to gain his confidence. Some horses have mild disposition, easily taught, while others are the opposite. Some require to be dealt with with a great deal of positiveness and firmness at all times. Others you cannot be too gentle with, either with your whip or voice.

I believe in handling all horses and keeping them at a proper distance. Never fondle, tease or worry a horse and more especially a stallion,

for they get gay enough and will soon learn to become worthless and dangerous.

Never whip and slash a horse after you have passed an object at which he has taken fright. Use your whip in going up to it and speaking only.

Always correct your horse in harness or under the saddle the moment he stumbles. In case he should do so again he will fear punishment and catch himself, but not go down.

Never hitch a horse with defective harness or wagon, more especially as regards the harness. Nothing will cause more serious accident than that the breech-band should break. All parts of the harness should be in keeping.

It is well to hitch all horses double the first time they are hitched, especially to a top buggy. They get a sight of the buggy entirely different and are liable to bolt or kick and in their fright pay little attention to the driver, while on the other hand, having a broken horse beside him will give him confidence and in a few miles' drive you have accomplished your work without accident.

A horse running and trying to get away from a top machine will take a long time for them to get over it. I do not think any horse properly broken until he has been used without blinds and made familiar with tops, &c. Any horse can be broken to tops at first as well as other wagons,

and if you think there is a chance for him to try to run and want to get away, use foot rope at once and you'll never fail to conquer your animal.

Horses are fearful of falling in a hole, or being deprived of the use of their legs, so when you pull his front legs and deprive him of all strength, the sudden relaxation soon makes him as docile as a lamb.

In hitching up a young horse that is willing to pull, never allow him to start the entire load, but let the teamster always be careful; as when a young horse pulls too hard he is apt to cause trouble and ruin himself by causing spavin, rupture of wind, blind staggers and a great many other troubles.

To Drive a Horse With Galvanic Battery.

Take any ordinary battery. Get copper wires long enough to run from wagon to the harness saddle. Place a copper plate two inches square under the saddle, then turn the battery on. The horse will show all kinds of motions, but will soon want to leave the spot. He may go only a short distance and stop again, when repeat and start as before. He will soon dislike this as much as the sting of a bee and will be willing to start. The battery may also be incased in leather and put between the knee and ankle of front leg. I have used this for many years with success on young and old horses that would positively refuse to leave the stable with a light sulky.

How to Drive a Horse.

The Washington Post of the 17th instant contains a column article on "how to drive a horse," embracing thoughts suggested by the fatal accident to Capt. Widdicombe, of Washington, and advanced by Dr. G. R. Hollingsworth, of this city. The Post says: "Dr. G. R. Hollingsworth, a veterinary surgeon of Hagerstown, Md., one of the first men to reach the captain and care for him until the doctors arrived, is convinced that the accident was fatal in its termination owing to a defect in the bridle on the horse that ran away. Such an accident may happen to any one, and the observations and conclusion drawn by Dr. Hollingsworth are worthy of being remembered and heeded by every man in Washington who owns a horse or occasionally drives one." Doctor Hollingsworth's advice is too lengthy for reproduction at this time. His father was a horse breeder before and it has been a lifetime work with the doctor himself, so that he talks understandingly on the subject. What he says is of much interest and should be read by every person

who drives a horse.—From Hagerstown *Evening Globe.*

The Washington Post of a recent date contains the following interview with Dr. Hollingsworth:

"The safety of human life often hangs upon a very small and apparently trivial affair. This is illustrated in the recent death of Capt. Widdicombe. Dr. G. R. Hollingsworth, a veterinary surgeon of Hagerstown, Md., one of the first men to reach the captain and care for him until the doctors arrived, is convinced that the accident was fatal in its termination owing to a defect in the bridle on the horse that ran away. Such an accident may happen to any one, and the observations and conclusions drawn by Dr. Hollingsworth are worthy of being remembered and heeded by every man in Washington who owns a horse or occasionally drives one.

"Immediately after the body of Capt. Widdicombe was removed the doctor examined the harness and bridle, and found that the bridle had no kimble-bit, and therein lay the secret of the inability of the driver to control in any manner the movements of his horse. In this case the kimble was fastened in the ordinary or regular driving bit, when there should have been a kimble-bit fastened to it. So when Capt. Widdicombe's horse began to run, and the driver pulled upon the lines, he simply pulled against the horse's

nose, and not on his mouth. In fact a halter would have been as serviceable as the bridle that was on that runaway horse. The kimble-bit, said Dr. Hollingsworth, holds the horse's head up; and when it is properly applied the driver has perfect control of his horse, and can guide him, or jerk him off his feet even if he is running away. Of course, a horse can be driven by a halter, and this bridle was all right so long as the animal did not frighten.

Speaking of kimbles in general, the doctor said they were now largely in use. They can be cut of flat leather, and three of them can be made while a harnessmaker is making one side rein. They should be a part of every bridle.

"Before a driver gets into a vehicle of any sort," says Dr. Hollingsworth, "he should inspect his harness, see that it is all right, and that his animal is properly hitched. Kimbles are useful in many ways, and are essential. It is almost impossible for a horse to kick enough to do any damage with this little thing in use. To kick with great force he must get his head down, and if you'll notice you will see that a runaway horse always gets his head down against his breast. Without a kimble on he could get his head down there and you could no more have any effect upon him by pulling on the line than if you had the lines around his shoulder. It would be physically impossible to open his mouth. Yes,

indeed, side reins and kimbles are indispensable. A horse should not be reined up so as to torture him, any more than a man would wear an uncomfortably high collar. But he should be drawn up to his natural carriage. Without a rein it is an easy matter for a horse to get his foot over the line, or get the line over the shaft while you are talking, and then if he should be frightened he has you at his mercy, and a runaway horse is merciless. Suppose you stop your animal and he has no rein on? The first thing he does is to stretch his head out and take it easy. By doing so he gets two or three feet of slack line. Suppose now he frightens and jumps? Before you can grab the lines and recover the slack he has six or eight feet start and every advantage.

"A horse that once runs off with his driver behind him like this one did may be set down as a dangerous animal. He seldom gets over the fright, and I'll venture you can't get that horse near a buggy now. If he runs off without any one being in the buggy, the case is different; but when his driver is with him and he feels the tug at the lines and knows he has the best of it, the chances are that he will do it again at the first opportunity.

"It is absolutely necessary for a man to know the disposition of his horse, and my advice to a probable buyer would be to never purchase a horse until it had been thoroughly tested by an

experienced horseman. You can't tell a near-sighted horse by his eye, but you can by his actions, and a near-sighted horse will frighten and shy at the same object day after day and you can't break him from it. The reason is obvious; he doesn't see it until he gets on it, and is naturally scared. Horses have nerves the same as men, and some of them are nervous, so that it is impossible to break them so they will not frighten at certain objects. I have known animals who trembled and shook at the sound of escaping steam and would fly from it in blind terror. They couldn't help it. They were nervous and born that way. This nervousness is seen in some high-bred speed horses. They can make excellent time in private or on a track alone, but the moment they encounter the excitement and company of the race they go to pieces.

"The disposition of a horse should also be studied. A high-spirited horse is never a steady worker. He either wants to do all the work or won't do any of it, and turns to balking.

"But, after all," said Dr. Hollingsworth, "horses are not naturally bad. They are the most domestic of animals and the most petted. It is bad drivers who make them bad. Men who drive horses should remember this one thing: A horse never stops to plan anything. All that he does he does on the impulse, quick as a flash. His

brain cannot grasp two things at once, and when you see him doing something he ought not to do, divert his attention from it. The horse forgets it instantly. He can't pay attention to his driver and be about the business of getting frightened, and he knows when he has a friend and a master behind him, too. A nervous man always makes a horse nervous, and of the two the animal generally gets the best of it. Suppose you are out driving, with a bridle properly equipped, with a kimble-bit, as you ought to have, and the horse begins to act badly. How frequently we have seen drivers 'churn' with the lines and keep seesawing and crying 'whoa, whoa, whoa,' after a nervous fashion. The horse recognizes that kind of a driver. A good horseman never says 'whoa' unless he means for his horse to stop. The proper way to do when your horse gets the better of you is to jirk him violently with the right line, then jirk him back with the left, accompanying it with a sharp 'steady, Dick,' and my word for it that beast will steady down and go about his business. With the proper kind of a bridle a man ought to be able to pull his horses' head around to his side and tangle his legs up so that he would fall if such was necessary to stop the speed of the animal. Now, Capt. Widdicombe I saw drop one line and grab the right with both hands in attempting to turn his horse, but he could not

move him, for the reason that he had no control of his mouth at all.

"When a horse shies, nine men out of ten, when they get by the object at which the animal frightened, say, 'I'll give you shy enough,' and lay on with the whip. They only ruin the horse's disposition. The moment he was past the object that frightened him he was all right again, and he does not know why he is being whipped. The time to use the whip is to touch him with it lightly when he shies, speak to him, and let him know he has a friend behind him. Give him confidence in you.

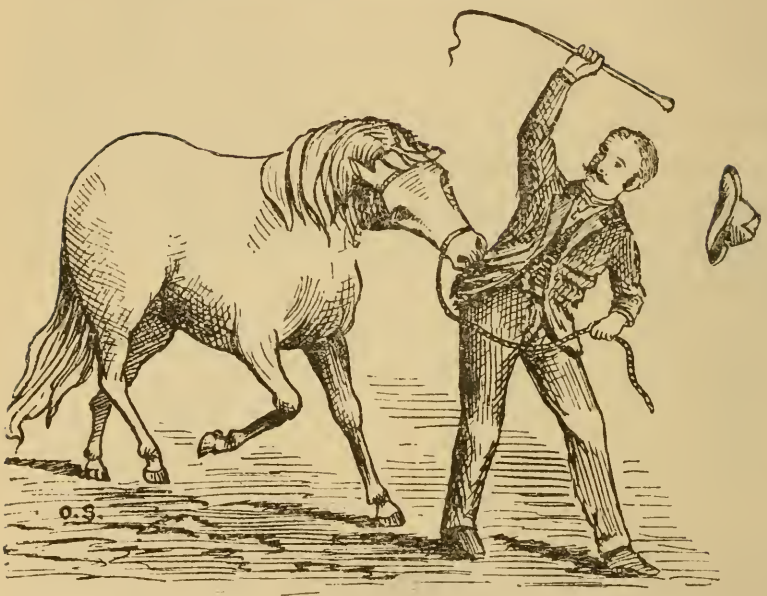
"There is one thing I would like to impress upon every man who owns a horse, and that is this: If he owns a horse in which he has not the utmost confidence, and behind which he does not feel perfectly safe, dispose of him. He will make an excellent horse for some one else, but not for the owner. If the driver is nervous the horse knows it, and the driver takes risks that he ought not to take."

Dr. Hollingsworth's father was a horse breeder before, and it has been a lifetime work with the doctor himself, so that he talks understandingly on the subject. What he says is of much interest and doubly so just at this time, when the death of Capt. Widdicombe is fresh in the public mind.

The above cut shows position of getting ready to throw a horse. Having his leg pulled up, take the rope over his back and hold fast on the top of his weathers. When you are ready for the tilt, pull his head to you, keeping it close to

his side. If he works you much, put the rein from his mouth through one ring on your surcingle. This will hold him. Now work to throw him, keeping your elbow pushing in his side. If he does not come down at once, the better for him, and when he does go down he won't feel so strong. Pull his head back to his body as shown in illustration and by holding his head close to his side, no horse can get up, and he can kick and use his legs all he wants, but all in vain. You can now show him a good time with all the noise you wish. To make him familiar, use curry comb, brush, etc., on him. Keep him down until you can let his head go and he will still lie down and you can curry, etc.

Hancock Biting.



The above cut will show the vicious biting stallion Hancock. This stallion was very hard to bridle and would shake you whenever he could, as a dog would a rat.

I bought this animal for five hundred dollars, when no one could handle him without great danger. I bought him in Washington, D. C., from a company, and on my way home he came

near killing a colored man at Rockville, Maryland.

I fixed him in a box stall for dinner and fed him at that time. No one was at the stable at that time, it being Sunday. The colored man in charge of the stable had stepped away so a friend who was with me helped to put the teams away, he also driving. On coming out to get ready to continue our journey, the hostler saw us coming before we saw him, so he ran to get the teams ready, and on going through the yard we stopped and began a little talk with the hotel man, when all at once we heard loud screams and I suspecting something wrong, ran to the stable. The first thing that greeted my sight was the stallion holding and shaking the hostler, having caught him in the breast. He wore a full suit of gray cloth, country-made, and strong. I saw I must do something at once. They fed baled hay and many sticks lay around the door. I grabbed up one of these sticks and gave the horse a blow over the right ear, almost bringing him to the ground, this making him drop the man, who was out of breath. I shall never forget his looks. He weighed, I suppose, one hundred and seventy-five pounds, and a pure-bred negro, black as ever I saw. If ever I saw black turn to white this was the time. His clothes were torn and he was bruised, but nothing serious. I said to him are

you hurt? He replied, "Oh! boss, I am almost killed; that is an awful horse, I did nothing to him."

The halter was off, no bridle on him and I was in a queer fix to know how to get into and get the bridle on him and start. So, not waiting a minute, while he had not fully gotten over the lick I gave him, I entered the stall and slipped the halter over his head, then fastened his head down close to the manger and bridled him and left. I was delighted no blood had been spilled and the only damage was to the man's clothing. I gave him one dollar to replace the stitches.

After I got the horse home I commenced working on him. At first I had much trouble with him to subdue him, but did it nicely, and even learned him many tricks, to kneel down, whether you would tell him in harness or out of it.

While I was training him, I had my old hand that had been with me seven years, a colored man, and I had him to pass his hand through his mouth, etc., to get him familiar with him. This man took charge of him and in the four years the horse never bit him.

I was shipping horses at the time and went to the city and was gone some three weeks. When I returned I took him out one day to show him to some friends. He had forgotten me and, while he stood in front of me, the notion took him in a flash and he jumped at me, took hold and began

shaking. I had the butt end of a whip in my hand and I gave it to him whenever I could get a lick in. Finally, his hold broke and I was covered with blood.

I was laid up for some time, but the minute I was able, I put him through the school, you can bet, and after I had given him several lessons I never had a better friend. I stood him spring and fall and he was always handsome, and could trot a mile any day in two minutes fifty seconds.

I sold him one year ago to a company for nine hundred dollars. They have done splendidly with him and are more than pleased with him and handle and drive him nicely, and have visited here trying to buy some of his colts. He weighed twelve hundred pounds, was sixteen hands high, fine tail, and mane, and chestnut, with no white.

The way I trained this stallion was with kindness and postiveness. I took gun powder when I went into his stall, placed it in an old piece of leather fastened to my sleeve. I went just far enough to let him come to the length of his chain, so if a little closer he would grab. When he was trying to take hold, my man handed me a lighted match. The blaze was out just as he was nibbling at my sleeve. I dropped it in the powder; oh, how he jumped from it. The smoke flew in his face. He thought he did it by biting. I then

tried to get him to take hold; but no, he smelt the powder on my clothes and disliked it.

We used a pair of old gloves rubbed with brimstone, which he hated, and never wanted to take hold of to bite.

I then gave him lessons with the war bridle and soon had him my family horse and drove nothing else when I took them out for a drive, and all became very much attached to him.

I also used a foot rope on him to make him feel his strength was weak.

Stallions on the stand should have exercise every day and be fed solid food, oats and corn mixed.

Hancock Under Saddle.

The above cut shows the chestnut stallion "Hancock" in the great democratic rally over Grover Cleveland, ridden by the chief marshall. He was the center of attraction. Thousands took part on horse back, wagons, etc.

Shoeing Horses.

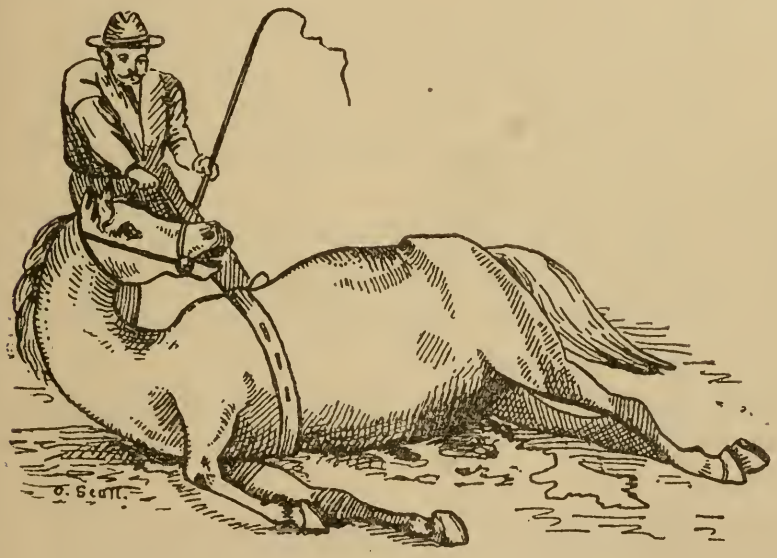
Having had the opportunity for twenty years, having hundreds of horses shod yearly, and in many large cities, I shall say at this point I shall not abuse the blacksmith and will give my reasons for so doing.

I have heard many lectures by so-called professionals, in which the smith was the center of attraction. It is well understood that in every town and county you have men dealing in horses. It is their interest to see that their horses are shod properly for the market. If he is a livery man and, in this enlightened day, reading different papers and horse journals, he is prepared when he goes to the shop and chances to meet a smith who understands working in iron and ready to be taught, providing he does not know. The smith, if he cannot read a word, soon learns from this class of men to shoe horses, for surely there is enough of them in the country, that no smith will be missed.

Its the farmer and the owner of horses who neglect their feet as a rule, allowing shoes to

stay on too long. Horses stand on board floors without any appliances to their feet until they become dry and hard. They are then taken out and driven with long feet, possibly thrush in the feet. Horses then get sore in the feet and commence to contract at the heel.

The owner should not think that his labor is not needed with the smith in keeping feet in good shape. You may have a good laundry to which to take your socks. They may be ever so



HOLDING A HORSE WHILE DOWN.

clean, but unless you wash your feet and keep them clean the socks will not keep out the smell.

After driving a horse on a hard road or a track, his feet should be stuffed with clay or flax-seed

meal, when the oil has not been abstracted, or cow-dung. There can be no excuse offered for negligence, for surely one out of the three can be had.

Some horses have very sensitive feet, like people. Some require much more attention than others. While some horses will hold a shoe until entirely worn out, others having a thin shell will be the opposite. In this case very light shoes should be used and, in fact, horses should be shod accordingly.

Hind shoes should never be used for front feet. Many farmers buy them because they get more shoes. You cannot level a hind shoe to fit properly on the front foot, especially if the horse is inclined to be flat-footed.

Never use nails any larger than possible. Never rasp above the nails nor burn a horse's foot, only to ascertain where the uneven places are to be gotten level.

I shall not enter into fancy shoeing, for surely the trackmen and experts are all up to this matter.

Many farmers had better keep shoes from their horses' feet whenever they can, while doing farm work, for it is far better than to allow shoes to stay on too long. Where the feet get very long, I have seen cases of ring bone, toe turning up put in great strain.

Never trim or pare out the bars or cut the frog,

for you take out the cushion, its expander, and allows the heel to contract.

Always shoe front feet naturally, with flat shoe, so the foot will come down squarely and the tendons will not be strained.

Always examine your horse more closely in town than country for nails that he may chance to pick up.

Breathing.

A developed, healthy horse will take one inspiration to three of the pulse beats. When he breathes frequently or slower, and when irregular or difficult and laborious, there is one of three diseases.

Although horses heated from being driven or close stable when hot or when exposed to summer sun, the pulse and breathing valve quickens by the heat; on removing him to a cool place will soon abate, and he may be examined, and if from heat, breathing will subside.

Pulse.

The pulse of a horse is felt on the inner angle of the lower jaw, the most convenient place to feel. It it also important to watch his eye while taking the pulse.

The state of the pulse tells the condition of the heart, whether the disease is of a higher or im-

pressed character or whether sickness is present.

If the horse is standing still and his pulse beats fifty-three or more in a minute, he has fever. When pressing on an artery and you feel it empty, or feeble, soft, he has weak pulse. When it feels hard when pressing the finger and when it beats two rapid beats at once, this may be termed a double pulse. In fever the pulse may change and get higher, generally at noon.

Temperature.

The temperature of a healthy horse is about one hundred degrees fahrenheit. Hot weather increases temperature; cold weather, the reverse. Mares higher temperature than horses. Young horses, high life, good condition, temperature is higher than an old horse, unless the old horse is a strong feeder and digestion is good.

The most convenient way to take the temperature is to introduce a thermometer into rectum. Every man who owns stock should always keep a thermometer. It can be had through any druggist or any one dealing in surgical instruments. The self-registering thermometer is the best. It should remain far in the rectum, only leaving room to take a hold to take it out. Leave it in five minutes. Be sure that the mercury is below the temperature mark before inserting it.

Horses' Food.

Horses are usually fed three times daily, namely, in the morning, at mid-day and at night.

It is not possible to state the exact quantity of food a horse requires to keep him in good working condition.

In all cases the horse himself tells whether he is getting too much or too little.

The best feed for ordinary road horses is oats. Ten pounds of hay is a fair allowance; fast working horses, from 15 to 20 pounds of hay; draft horses, one-third of the hay may be given during the day, the balance at night.

Horses differ very much in the quantity of hay they may eat without inconvenience; in fact, they vary so much in size, age, breeding temper, condition and labor they are called upon to perform, that it is impossible to fix upon any specific rules for feeding them.

Oats should be bruised for an old horse, but not for a young one, because the former, through age and defective teeth, cannot chew oats properly; the young horse can do so, and it is thus properly mixed with the saliva and turned into wholesome nutriment.

Carrots given occasionally will give a fine, silky appearance to the coat, and experiments have shown that the best way to feed carrots is to give them with oats. If you are in the habit

of feeding four quarts of oats to a mess, give two of oats and two of sliced carrots, and the result will be more satisfactory than if each were fed separately.

Youatt writes of the carrot: "This root is held in much esteem. There is none better, or perhaps as good. When first given it is slightly diuretic and laxative, but as the horse becomes accustomed to it, the effects ceased to be produced. They improve the state of the skin. They form a good substitute for grass, and an excellent alterative for horses out of condition. To sick and idle horses they render grain unnecessary. They are beneficial in all chronic diseases connected with breathing, and have a marked influence upon chronic cough and broken wind. They are serviceable in diseases of the skin, and, in combination with oats, they restore a worn horse more than oats alone."

It is also advantageous to chop hay fed to a horse, and to sprinkle the hay with water that has salt dissolved in it—a teaspoonful of salt to a bucket of water is sufficient.

Rack feeding is wasteful. The better plan is to feed with hay chopped from a manger; because the food is not then thrown about and is more easy to chew and digest.

Vetches and cut grass should always be given in the spring to horses that cannot be turned out in the fields, because they are very cool and re-

freshing and almost medicinal in their effects; but they must be supplied in moderation, as they are liable to ferment in the stomach, if given largely.

As often as once a week a change of food should be made—one feed of cut hay and meal, or cut hay with shorts will do.

Musty hay on no account should be fed to horses. Let the food be the best of its kind, for in the end it is the cheapest.

Water for Horses.

Horses all prefer soft water. They would rather drink from old ponds, and push the green aside that floats on the ponds, and when they are used to pond water it takes days to get them used to drinking clear, running water that is hard.

Horses properly should be watered three times a day. In warm weather they should be watered the last thing at night, as late as 9 or 10 o'clock. Horses should be watered in the morning before they get their breakfast.

A horse thirsty never enjoys his dry feed, and is not so apt to suffer from colic. If after a hearty meal a horse takes too much water into his stomach, it may cause sickness.

Persons should never water horses while hot. He had better suffer on the road for an hour or so rather than water him out of a well or spring until you can stop and let him cool out thoroughly,

and even then he should not be allowed to drink without intermission. Have him to take his head from the bucket and breathe several times between swallows.

Loss of Hair.

To promote the growing of hair, where the skin has been deadened by bruises or rubbing, take of quinine 8 grs., finely powdered; galls, 10 grs.; powdered capsicum, 5 grs.; oil of almonds and cosmoline, of each 1 oz.; oil of lavender, 20 drops; mix thoroughly and apply a small quantity to the denuded parts 2 or 3 times a week. Where there is falling out of the hair of the mane and tail take glycerine 2 oz.; sulphur, 1 oz.; acetate of lead, 2 drs.; water, 8 oz., to be well mixed and applied by means of a sponge.

Halter Pulling.

Take a rope half inch thick, 20 feet long, tie a slip knot in it and put it over his loins and run it through the loop under his belly; bring it through his fore legs, up through the halter and tie it to the manger, and when he flies back it tightens in his flanks and will cause him to stop the habit.

Nothing in Cheap Colts.

Five years from this time the man who raises common and half-scrub horses for market is going to complain that there is no sale for horses.

His neighbor who used only choice brood mares and chooses the sires with good judgment will continue to find some profit in the business.

Horses are declining in price now, as was to be expected from the excessive breeding of the last six or eight years, and rough stock has to seek buyers. This state of affairs will doubtless grow some worse, but first-class horses are always wanted.

Buyers will not look at low grade stock when choice can be had at reasonable prices.

The depression in cattle led many farmers to raise colts instead, and they have sold some ordinary young horses at good figures, but they will do well to study the subject and see if there is any hope of sure profit, for a few years at least, from breeding rough and little mares any longer.

It is a safe rule to breed only the best of any kind of stock.

Time to Castrate.

Any time when the weather is warm and the blood in good condition. Never castrate after being sick until perfectly well.

After stock have been on grass and all fever has been cleansed from the blood, is a very excellent time.

If flies are bad, carbolic acid and vaseline or lard and gum camphor melted together, and

grease well. Take three ounces camphor and of lard eight ounces.

I recommend the ecraseur and every breeder of stock should have one and use on his old stock; old boars or bulls as well as horses. Above all, keep the instrument at all times perfectly clean. Use tooth brush to clean the chain, taking it apart, and in using the ecraseur never be in a hurry and twist the chain fast; slow and easy will be found best. Cleanse chain with carbolic acid.

Castration Ridglings.

One or both testicles that have failed to come into scrotum. This must be done by one who has special skill with the parts. Some men are especially adapted to perform the operation, having a long, slim hand and can enter through much smaller channel and leaving small space to heal. If instrument and hand should first undergo and aseptic, you take but little risk in having the work done and can sell the horse for a higher price.

Caution in Feeding Colts Grain.

Mares with colts soon learn them to eat grain and some colts are great feeders and should be watched.

Foals will begin to eat grain at a very early

age. They learn it from their mothers, but the latter are sometimes so greedy and selfish as to drive their offsprings from the manger, more especially as the foals grow up.

The inclination which the young animal evinces for grain should be fostered by every practicable means, especially when it has attained the age of two or three months.

If the dam is resolutely opposed to this measure, it will be desirable that she should be tied up, or secured at a distance from the manger, till her foal has partaken of as much grain as he is inclined to eat, and this should be oats and bran and not then allowed to be a glutton.

Rupture in Colts.

For this disease or trouble with colts, I would refer my reader to the instructions on "Rupture in Calves," as found under the heading of cattle.

How to Understand Diseases of Horses.

I am so often asked how do you tell the ailments of horses and different disease?

I can tell you in few words. A shut mouth tells no lies. Nobody is deceived. Nature has provided in its great power, weights and measure that can be used if only you look for them and keep company with a sick animal.

If a horse should bruise his heel, he will set his foot out. If injured behind, he will show it by resting his leg, etc. If unwell, stoppage of water or bowels. He will give you to understand very quickly as well as other diseases, although many persons go astray and listen to B. and C., and give many things they should not give and mistake the ailments of the horse. Every man will have him different. Many think when a horse is suffering from some stomach trouble, he has overquantity of bots. This is all wrong. Never doctor a horse for the bots, as I shall describe hereafter. You will soon see your horse is suffering kidneys, indigestion, colic.

Its always well to ascertain what the horse has had to eat and when last watered. Sometimes the most simple remedy gives relief in helping nature to throw off disease.

I do not believe in using many strong drugs, unless in heroic cases it is required. Then it should be done with forethought and give your medicine time to act.

I shall give many valuable remedies, which I have used, most of them with such results that I feel no hesitancy in asking the reader to use them.

Horse flesh will decay much sooner than human flesh. Therefore, their organs are slower than man to get over a shock, and if paralyzed with

strong drugs you may not expect good results.

The skin of a horse is very sensitive, you may rub turpentine on your flesh and you do not mind it; put it on a horse and you would think he was in great agony. You cannot make him stand as he will try in every way to relieve himself.

Mares Foaling.

Farmers are more or less acquainted in this direction, keeping the time when service of the horse is performed and by the many signs patent to the eye such as milk running from the bag, flanks seem to fall, finally the mare becomes uneasy when feeding awhile then whisking her tail. If sound and suple she may lie down until the pain has passed off when she will arise again and then again she may lie down, and with a little twitching and moving of the flanks the water will break; then the fore feet, with the nose, between the knees and a few more pains the colts comes.

Some mares foal standing the whole time and may not take from 8 to 15 minutes.

Colts coming too soon, before nature has provided for them to come, is attended with more or less danger to the mare. Should the head get turned back and impossible for the colt to come, greasing your arm well after washing and cleaning it to remove all poison that may be on the

hands, as hands have always got poison insects on them that cannot be seen with the naked eye. These insects should they be broken while in the mare will soon set up inflammation.

Now insert your hand until you can reach the colt. Having a small cotton rope palmed in your hand, if head foremost, get both feet together and tie them. Then take the second rope; put it around the colt's jaw. If the parts become dry, use plenty of lard. When the mare has pain, draw on your ropes. If she is standing and is inclined to kick, put her in a narrow stall, place rails behind her that you may be safe in working with her.

Should a mare be inclined to loose her colt coming before the time, put her in a quiet place and give her opium, 1½ drs. every two hours. I prefer the opium as you do not excite the mare in giving it to her. If urgent case, give twice a day. In assisting a mare foaling, use great judgment to get the colt in right position before you undertake to take it from her.

Sometimes they have twins. You will be able to tell by the feet. If two are trying to come at once, take the one you think you can get best by using the rope and working the other back a little, when the other may come without any trouble. There are some dozen or more ways in which the colt may get twisted, making it diffi-

cult to foal and in these cases do not delay in getting a man experienced to relieve the mare.

Never allow horses to be hitched to a mare to take the colt from her. Have the colt taken in parts.

Inflammation of the Bowels.

Acute pain in the belly, no intervals of rest from pain, rolling, kicking, tramping about, sweating and breathing fast with great fever and seems much excited.

Some have mistaken the disease for colic. In colic there may be times of ease from pain, but never in this disease. It arises from exposure to cold, drinking cold water in great quantities when hot being very costive, diarrhoea or poisoned drugs administered into the stomach.

Relieve the animal of the pain first. Give tincture of aconite root, 30 drs.; repeat in two hours. Tie blankets dipped in boiling water, wring out quickly and apply to the belly while hot. Do so every fifteen to thirty minutes, use injections—hot water, soap, castile, fine salt, 2 tablespoonsful every half hour; to be kept up while there is enough strength in the animal.

Never give purgatives, for you cannot wait on delays. Take no blood from the horse.

Old Sores.

When they are slow in healing take butter of

antimony, wash and cleanse the sore and take a little mop and touch the sore nicely with the butter of antimony. Then use corrosive liniment once a day for five days. Then grease with gum camphor, 4 oz.; hog's lard, 8 oz.

This ointment will be good for horses rubbed or chafed by harness and good to dry up the milk of all animals by rubbing their bags.

Burns.

Protect immediately from the air by layers of cotton or wool and pour on carron oil, zinc, oxide, 12 parts, vaseline or glycerine and water.

For foul discharge touch the places with corrosive liniment. Also use lime liniment. I would recommend last-named liniment to the former.

To Soften Horses' Feet.

Fish oil one pint; lard, one pint.

To Grow the Hoofs.

Take salt petre and put in little round sacks made out of thin muslin, fill until they are round and tight, with strings to tie at each end; then put water on his legs, so the bags will get wet and run little by little over the hoofs. Use when in the stable.

The Bots.

Of the worms which inhabit the body of a horse

the one that seems to be the center of attraction is the bot.

Many owners of horses are misled. The first impression on seeing a horse with some stomach trouble is that he has the bots. This they try to relieve, when, in fact, anything that would destroy the bot, would kill the horse.

I shall not pass this matter hurriedly, so many differing on the subject. I have noticed closely and write from observation.

The gad fly lays his eggs during the summer months on the horse's front legs and in fact can deposit them all over the body. Now the pest fly commences to bite the legs of the horse, and in rubbing and licking his legs, these little yellow eggs or nits get into his mouth and are taken into the stomach. There they grow from ten to twelve months. Then they pass from the horse in his dung and in a short time are ready to fall into ranks with the old flies and commence their work.

I believe them to be injurious, when they get in large quantities in the stomach, which they will do when horses are in pasture during the grazing season.

Horses and colts will look badly in the hair and get thin and grow little until they get in pasture and begin to pass the bots.

I have experimented by taking fish brine and washing colts' legs and killing the nits and pre-

venting their stomachs from being loaded with the pests. The brine kills the nits.

I consider it important to watch the matter and the owner will reap the reward in the development and health of his horses.

Some seasons the bot fly seems to be worse than at other seasons. If you notice your horses and colts look badly in the hair you can only feed them nourishing food.

Chopped feed is very good, and grow the bot until it passes from the animal. Good feed will sustain the bot and he will not worry the horse. It may take a little more feed but the animal will grow right along and do nicely.

The natural history of the bot is blank in my mind, but is hereditary with the horse and it comes into the world with him. The moment of foaling he has the little pest in his stomach much so as a horse five years old.

He is found attached to the cuticle or insensible coating in the upper portion of the stomach not by his head, as is properly supposed, but hanging by his tail.

For a month he has a little orifice, no larger than the point of a cambric needle with which he feeds upon the stomach it can soften down into the chime. This tiny mouth he can close against substances that do not please his appetite.

Being covered with a scaly, hard covering, neither caustic or poison will operate.

The grub worm, which has no relationship whatever, is a light yellow worm that is easily passed from the horse and lives among parcels of food and performs the same office as worms do in children. When multiplied in great numbers cause much uneasiness and irritation, but never cause death.

I have opened and examined very many horses after death and it is surprising to see how quickly a bot can bore a hole through the stomach.

I believe in cases of lung trouble and other diseases when a horse does not lie down but stands to the last, that he never would lie down before he dies if it were not for the bot, being sensitive of the relaxation of the stomach and afraid of falling or losing his hold. Keeps boring to retain it is what causes the pain just before a horse dies and will cause him to lie down.

I have opened horses when in fine health that had been injured and killed instantly. I have opened them an hour afterward and their stomachs looked like they had been shot at with a double barreled shot gun.

I consider it important to wash all colts and horses' legs when brought in for the winter, if not done before with wash as prescribed. One season will convince you of the importance, in addition to good feeding. Should you have a horse

look badly, sulphate of iron and gentin root, 3 drs. each mixed, makes 1 dose from once to twice a week, as the case may require.

Colic in Horses.

This I shall not pass with one or more receipts but shall give enough to satisfy the owner's requirements at home and abroad when something must come to his aid at once.

Spasmodic Colic.

All at once he shakes himself, leaves his feed, paws, looks at his flanks, as pointing to the disease, stamps about and kicking his belly with his hind legs and then seems a little easy when another spasm comes on and he will roll, get on his back sometimes in trying to relieve his agony. Drinking cold water when hot, and when used to water not so cold.

Treatment—first give something to heat the stomach, whiskey or warm beer, one oz. of ground ginger. If not better in twenty minutes, give a drench, tincture of aconite, thirty drops, spirits of turpentine, one oz. one bottle of beer or ale. Give injections, warm water, castile soap, handfull of fine salt. Then walk him slowly, and to excite the bowels to action. See drenches.

G. Washington's Colic Cure.

George Washington's treatment for colic: Take chamber lye, one quart, make hot, give all in one drench. I have used it and it is good. I

have saved several fine animals when nothing else could be had. If the urine is several hours' old the better.

Constipation of The Bowels.

Powdered aloes, one ounce; tincture aconite root, thirty drops; chloroform, half ounce; give in drench. Injections every hour, and aconite every four hours, until the pain has passed away. Country receipe—horse dung, two quarts, pour boiling water, three pints, and drench.

Flatulent Colic.

Pain is shockingly great, and in a few hours the bowels soon distend with gas called wind. This seems to kill or paralyze the parvagus and nerve centers, and even the brain.

You cannot mistake this colic, for the swelling at the flanks point direct cause. Indigestion of food fermentation sets in of carbonic acid gas. The horse and cow cannot belch wind from their stomach as man.

Colic When From Home.

Cure if from home, and cannot get drugs, use chamber lye, as stated, only putting handful fine salt. If this cannot be had, give hog's lard, one pint warm, one and ahalf ounce spirits of tur-

pentine. If you cannot get the above, give one pint of tobacco juice strong.

Drugs: Spirits of nitre two ounces, laudanum two oz., ginger one ounce, peppermint one ounce, ether two ounces, asafoetida one ounce; give in one pint of castor oil.

If not better in thirty minutes repeat. If very much swollen use mustard on the stomach, plastering it well in the hair, then cover with newspapers. This will hold tight and draw, mix with water, not vinegar.

All having failed, don't delay in using your tracer and every man who keeps horses and cattle should have one. Measure an equal distance from the haunch bone and the short rib and not too high upon the back. Force into distended bowels. Leave the tube then stick and pull out the tracer. Leave tube remain if it be for six hours, until all has subsided; then use sticking plaster over the wound.

Pneumonia or Lung Fever.

Pneumonia generally makes its appearance with a chill. The animal's breathing becomes rapid, he hangs his head, refuses to eat and lops his ears. Inserting the finger in the mouth it feels hot. Take the thermometer, place it in the rectum. The temperature will raise to 103 fahrenheit higher. The pulse is very frequent, 78 to 100, or more a minute. There is usually a dry cough from the beginning. In some cases little strings of blood may be seen in the nostrils; the nostrils are red; the legs are cold; the animal constipated and may be seen to pass mucus; the urine is scanty and a dark color. If the animal has no plurisy, has very little pain. If plurisy accompany the disease, the horse will be restless, sore and show a good deal of distress in moving about.

To test the case properly put the left hand flat against the horse's lungs, close the right hand, strike the other. The horse will groan and give way.

When not familiar with the respiratory, place

your ear to a sound horse than to the sick one. You will soon hear a crackling sound indicating grave trouble. When the animal grows worse, breathing much worse, flanks heave; with effort the animal looks wildly for help; as suffocation becomes more violent he staggers, but quickly recovers, finally he lies down in the hope of relief; more difficult to breathe when down; he worries himself upon his feet again and frequently leans and stands against the stall until he gradually goes down. He finally dies of suffocation. A horse may live from ten to seventeen days after he gets sick. When he commences to improve and eat and take notice, he will soon overcome the disease. The inflammation begins in the lower part and extends to the upper part of the lung.

Bandage the horse as far up as possible on the legs. Take one pound of the best mustard, rub his sides and cover that with half newspaper, having rubbed the mustard in the hair well will hold the paper on securely. Do not think because this revives the horse that it will answer. In 1½ hours take hot water, ferment the sides, apply again. If convenient to use a blanket dipped in hot water and kept closely to his sides will also be good. If both lungs are effected it may be a fatal case, the formation of abscess or gangren or mortification.

Much depends on good nursing and good

judgment. Give all the cold water he will drink, putting in each bucket of water 3 drs. of bicarbonate of potassium. Give quinine in capsules also the carbonate. Do not mix the two together. Give separately every hour and a half. Some horses will drink sweet milk. Give from three to five gallons a day. If the milk is not very pure add a dozen and a half eggs to the milk during the day, say four eggs each time. Try the horse on mashes, and in the winter when green food cannot be had, give corn fodder, and do not omit rubbing his legs several times a day until they are hot. Mortification and gangrene of the lungs means the death of the horse.

Strangles.

This is an infection contracted from other animals, or may be from feeding or hitching where a sick animal has been. They have fever for several days before it shows a clear case. It is often taken for distemper at the beginning.

Young horses are most subject from three to five years old. For this reason you drive or ship them around at this age where they can contract it. They have it but once, like children with mumps or measels. It seems to belong to the young animals as distemper, etc.; but only worse, and has often proven fatal if neglected, and may cause him to be heavy in the wind.

Apply hot poultice to the neck and steam with hot water, and, if you can get it, use unslaked lime. Put sheet over his head and let him have the benefit of the steam. Flax seed meal, with little lard, makes good poultice. Quinine or aconite should also be given. If the breathing is hard, use mustard on the sides to prevent any lung trouble. When any large lump has made its appearance, it should be opened and let pus

out. Never use strong blisters in this case and take good care of him when he is getting over a bad case that he does not take cold for he will be like old people getting over the grip—can be "easily set back." Feed good nourishing food when able to eat, but feed all soft food while sick. Even soak his hay; give bran mash and fodder, is good to help keep his bowels in good shape.

Weak or Inflamed Eyes.

Nothing has been more trying of late years with farmers than weak eyed horses and so many percheron and half breeds, I have seen, lose their eyes when young at work. I have tried to solve the matter and will give some ideas I have arrived at in the matter.

First, they fatten very easily and, of course, make plenty of blood. Most farmers who have large horses keep large collars. Now, the colt does not fill them close, so a collar pad is used to keep the shoulder from the leather and make it fit better. This makes a nice fit, so close that the jugular vain is very much pressed, causing the blood to flow to the eye and acts just like a strap fastened around the neck when about to bleed. This strain of horses break very easy and stay up in the collar with his fat neck, for all are fat, when they go to work as a rule, so with this pressure to inflame the eye and grain.

I have drawn this idea from the fact I have seen many colts broken in Virginia where they had run to straw during the winter and little

grain and fodder broke in the spring, and had no trouble like those raised in Maryland and Pennsylvania.

I would advise those who want to keep young animals for their own use to not keep them fat when you use them first and second summer until they have formed a neck for the collar and lost the surplus flesh or colt neck There are many ways to take care of a bad eye. The most important is to learn what caused it, and try to assist nature in restoring it.

I have used for weak eyes my eye wash, and if bad case put a seaton in back of the eye six or seven inches long in the skin, running it along just where the cheeks of the bridle would come if on him, starting the seaton side of the head, so it will be one inch above the eye and two inches from the eye, so go by the bridle and you can make no mistake.

Always examine for wheat beards, splinters under the eye lids. Sweet cream is good for bruises, etc. (See eye wash.)

Scratches and Swelled Legs.

This is very common and keeps many a good horse out of market. When in this condition it commences with great heat, ankle swelling, horse gets stiff and sometimes lame. Soon it breaks and gets very deep just under fetlocks.

Give one and half pounds epsom salts, four drams aloes, then give oats scalded, one part bran, two parts water. If in the country, feed fodder with mash. If the horse is very much down, give him good chop feed and good condition powders, or arsenic four grains, with one and a half drams bicorbonate of soda. Once a day use wet linen bandages. To rub down the swelling use zinc ointment or vaseline, two ounces; sugar lead, one dram and a half; and carbolic acid, fifteen drops. Wash after exercising.

Should he get dirt or sand about his feet, use castile soap and hot water. Put large handful coarse salt in water. (See also, ointments for scratches.)

Cut Eyelids or Warts.

Should he have warts on or about his lids, cut them with sharp knife. First thread a needle and pass it through the wart, then pull the wart and cut out. If lids are cut or torn take them up and be sure you have the ends come together nicely so they will not pucker, after they get well. If you take several ordinary pins and run them through the torn place and with a silk thread wrap around the pins like a figure eight.

Salve made of hog's lard, carbolic acid, will soon heal up, and the ointment should not be used if cut is close to the eye, that it might get into eye and cause him to rub and open the cut. Cold baths are good, or zinc ointment.

Ring Bone.

This is very serious when it takes hold of the horse, and should be treated before there are large deposit of boney growth.

Make an ointment one dram of the crystals with two ounces of vaseline rubbed in every day

for six days. I would advise you try last receipt, say Spanish fly blister, with five grains of biniodide mercury. Some persons do not like to have you use the fireiron on some pets. Then I use blisters, but of all for safe and speedy work, use fireiron and burn deep and as often as the case may require.

Bone Spavin.

Like ring bone, and treat the same. (See ring bone.)

Blood Spavin and Throughpins.

Early stage use iodine and aconite root, equal parts. If not better in five days, use good blister. (See ointments.)

Heaves.

This disease is indicated by a short, dull, spasmodic cough and a double jerking movement at the flank during expiration.

If a horse suffering from this disease is allowed to distend his stomach at his pleasure, with dry food entirely and then to drink cold water as much as he can hold, he is nearly worthless. But if his food be moistened and be allowed to drink a moderate quantity at a time, the disease is much less troublesome.

To remedy this complaint, use chopped feed and long straw; no corn. In chopped feed give

an ounce of powdered sulphate of iron, gentian and ginger root, making three ounces in all. Give in feed. If he refuses to eat it in the feed, take one pint of warm water and give it to the horse for five days, then give five grs. of arsenic once in twenty-four hours; then, after a week's intermission, commencing as before will soon cure many cases.

Give the animal feed in small bulk. Take a whiskey barrel, put in five pounds of tar, stir it up with water, then fill the barrel to the top. When the tar settles, the water gets clear, skim the top off and water the horse from the barrel. Rain water is best to fill the barrel.

Hide Bound.

To recruit a hide-bound horse, give nitrate potassia (or saltpetre) 4 oz.; crude antimony, 1 oz.; sulphur, ¼ of a pound. Nitrate of potassia and antimony should be finely pulverized; then add the sulphur and mix the whole well together. Dose—a tablespoonful of this mixture in a bran mash daily. Fennegreek.

Hoof Bound.

Cut down several lines from the coronet to the toe, all around the hoof, and fill the cuts with tallow and soap mixed; take off the shoes and if you can spare him, turn the animal into a wet meadow where his feet will be kept moist. Never remove the sole nor burn the lines down, as this increases instead of diminishes the evil.

Hoof Quarter Cracked.

Many plans have been devised by which to heal a quarter crack, such as scoring with a knife, blistering, cutting with a sharp, hot iron, riveting

and the like, all of which in many cases have proved a failure. If the following directions are followed, the fore feet will be sound in three months.

Above the crack and next to the hair, cut with your knife an incision one-half inch long crosswise of the crack, and about one-fourth inch deep. Now from the incision draw a line one-fourth inch each side, parallel with the crack. Then lay as much gun powder in the crack as it will hold and touch with a hot poker. This will harden the hoof and cause it to round out very fast; shoe with a bar shoe; keep his feet well greased with cosmoline, greasing an inch above the hair so it will take some time to run down over the hoof.

Thrush.

This is a discharge of very offensive matter from the cleft of the frog. It is inflammation of the lower surface of the sensible frog and during which pus is secreted together, with or instead of horn. In its treatment almost any astringent substance will check thrush in its early stage. Corrosive liniment sure cure.

Stoppage of Urine.

Symptoms: Frequent attempts to urinate, looking around at his sides, lying down, rolling and stretching.

Sweet spirits of nitre, two oz., in a half pint of warm water. If not relieved in an hour, half dose. Home remedy: Watermelon seed, half a tea cup, boiled in a half pint of water strained and give warm. Hot coffee, 1 pint, turpentine, 1 oz., for ten days teaspoonful saltpetre once a day in feed. In giving the nitre, take a peck of brand, pour boiling water over it, put in a bag and place on his loins.

Nail in the Foot.

A nail in a horse's foot or any sharp instrument that may penetrate is liable to cause great trouble, especially if punctured near the center of the foot. Nothing will be found better than to have the hole opened up so any blood or pus can come out.

Apply corrosive liniment; dry it in with a hot iron, and be sure that you hold the foot up and have the hole so open that the liniment will reach the bottom. Take some cotton bat, put in the hole; pour on some more liniment and stuff the foot with flax-seed meal. Dress the foot each day, taking out the cotton and using the liniment as before. With this treatment I never lost a horse in my life by lock-jaw. Never put off the treatment one hour after discovering the wound.

Bleeding.

Bleeding horses seems to be one of the things of the past. Physicians have done away with bleeding, believing it to weaken the system and vital energies. I do not care to dispute or say anything in the matter as regards human beings for in treating them there is a vast difference in treating horses. I do not believe that a small quantity of blood taken from a horse in case of being effected by heat, inflammation of the

bowels would not be injurious. The amount of blood to be taken at any one time will depend how long the disease has been running.

Founder makes the blood very black and should be kept running until color changes to a pretty red. The proper place to bleed is in the neck vein or jugular. After the strap is put on the vein will swell, then put your lance two inches and ahalf down the neck, where the two branches of the vessels unite. Put your lance lengthwise with the vein. If spring lance, thin neck horse, set your lance so it will not cut through the inner wall of the vein. Some persons never fasten the lips of a cut together. It should be done with a pin passing through the skin, bringing the edges together. Pull out a few hairs of the mane, wrapping it around the pin. Having wet the hair, now tie and cut the ends off. Wipe the neck off clean and in two days after take the pin out, holding the hair so you do not pull the lips apart.

A Subduing Bridle for the Whole World.

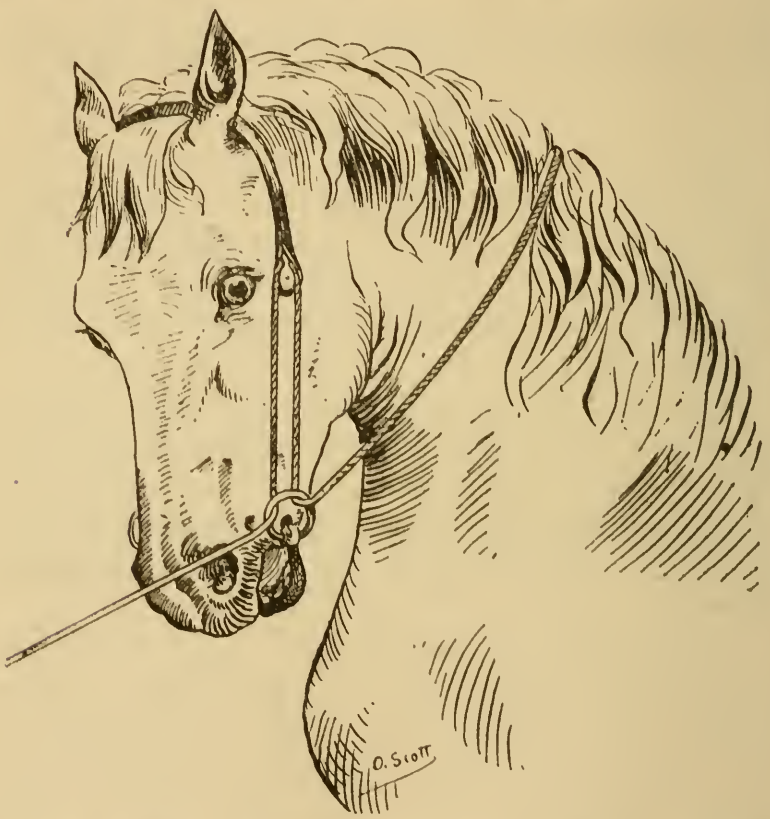
The cut on next page represents my patent bridle so simple and yet so effective and so mammoth in its work that the most vicious colt or horse can be made almost instantly to know his master and how to obey him.

And not until this is done are you ready to handle your horse. It will make a horse stand to be shod, to be curried, harnessed, broken to steam, unsurpassed for stallions, teaching colts to lead and turn at the pull of the lines when harnessed.

I cannot use language strong enough to fully describe its great value and usefulness. When used twenty minutes, you will be astonished at its unsurpassed value. It is so different from other appliances you have seen; can be used twenty times a day and never hurt or rub the animal and at the same time teach him to be the warmest friend you ever had.

You soon have him to follow and obey every

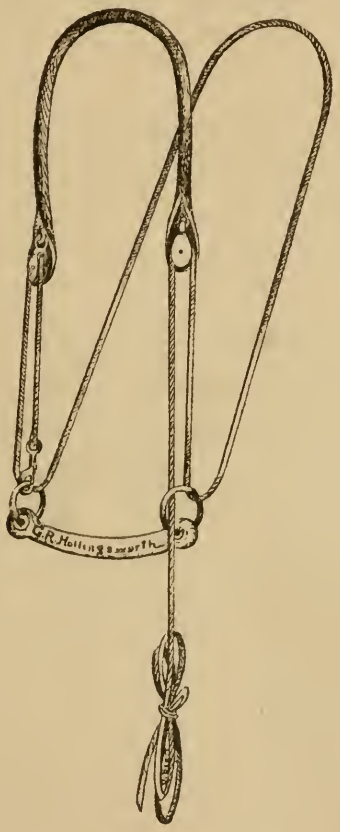
command. You will teach him to back by simply giving the cord a slight jirk and by pulling on it will teach him to come to you at the word always used yourself to speak when you want him to do anything so he will learn the word also.



This bridle should be used on every stallion when you want one under control and to listen to his master. For colts it is invaluable. You soon have perfect control of his head and neck

and when you get him in harness you will see the wonderful working.

You can guide and hold him, for he has been subdued and become gentle, for blacksmiths and



all who shoe horses should use one. You do away with twitch tongs upon his nose, also whipping and kicking in trying to get him to stand.

Horses hard to curry or harness can be entirely broken and become quiet.

Race horses that will bite when being rubbed will become gentle and you can use it as stated whenever the occasion requires with as much comfort to the animal as his regular driving bridle.

It is perfectly comfortable unless he does something requiring you to correct him. When you do so you never have to go to his head to relieve him of pain, for the bridle adjusts itself.

Working on rollers, it is impossible for any part to hold fast unless you want it. By pulling the cord tight and tie a loop between the bit and rollers on the left side, you will have him to stand like in harness, the cord over the neck holding his head in position.

In using the bridle for first time, use your whip to touch him up and teach him to be quick and follow you, right and left, as you may turn.

If a runaway animal and you expect danger, take a strap one inch wide after using break bridle, making it as long as your driving bridle. Bring the end of the strap through your bit, which must be a snaffle, bringing the ends through from the inside. Now sow or rivet rings on each end larger than on the bit and fasten the lines in these rings. When you pull you have full

control and hold any horse in the world that can be held by any such power, unless it be a fitty or dumb animal.

Patent applied for March 5th, 1892.

Cattle.

I would not think of closing my book without saying a few words about the ox, of which mention is made in the oldest history of the world, the Bible.

The ox belongs to the CLASS *mammalia*, animals having teats; the ORDER *ruminantia*, chewing their food a second time; the TRIBE *boridae*, the ox kind; the GENUS *bos*, the horns occupying the crest, projecting at first sideways and being porous or cellular within. Distinguished according to their teeth, they have eight *incisors* or cutting teeth in the lower jaw and none in the upper. They have no tusks, but they have six *molars* or grinding teeth in each jaw and on each side, making 32 teeth in all.

The native country of the ox, reckoning from the time of the flood, was the plains of Ararat, and he was a domesticated animal when he issued from the ark. The earliest record we have of the ox is in the sacred volume. Even in the antediluvian age, soon after the expulsion from Eden, the sheep had become the servant of man; and it

is not improbable that the ox was subjugated at the same time.

The records of profane history confirm this account of the early domestication and acknowledged value of this animal, for it was worshiped by the Egyptians and venerated among the inhabitants of India. The parent race of the ox is said to have been much larger than any of the present varieties.

The ox, in his wild state at least, was an enormous and fierce animal and ancient legends have thrown around him an air of mystery. In the earliest and most authentic account that we possess of the British Isles, we learn that the Britons possessed great numbers of cattle. No satisfactory description of these cattle occur in any ancient author; but they, with occasional exceptions, possessed no great bulk or beauty. The breeds of cattle, as they are now found in Great Britain, are almost as various as the soil of the different districts, or the fancies of the breeders.

At the present day we have as fine cattle as can be found across the waters, in fact we can find sale for our cattle across the waters, especially the fat cattle. I shall not speak of any particular breeds of cattle to breed from; our breeders differ so, some liking one breed and some another,

while some are used for their milk, others for the market.

The ages of cattle are told by the teeth and horns, while the horns are not accurate, especially in a heifer, should she take up at two years. In the bull the horns differ from the general rule. The heifer will show one ring at three years, the bull at five years. When a calf is one month old it has eight milk teeth on the lower jaw. All cattle are free from teeth on the upper jaw, having only nippers on the lower jaw. When eighteen months old they have lost the milk teeth and have two large nippers in the center in front. When two years old, four large nippers; three years old, six large nippers; one milk tooth at each corner. When four years and past they have a full mouth, having lost all their milk teeth. They then have a good mouth, that the buyer can go by till ten years old. After that time, the teeth shrink and separate and so continue to wear down in the gums until there is no accuracy of telling their age. It greatly depends on how they are taken care of in the manner of feeding and exposure.

Feeding Cattle.

The consumption of food depends upon the breed and make of cattle. Cattle with a round barrel will keep on less feed than one the opposite make. I do not want to put myself up against old feeders and cattle breeders, for their ways are well established and years of experience have led them to proper conclusion what and how they shall feed.

The less cows are exposed to rough weather, they will give more milk and remain more healthy and keep in good condition.

Cattle should be watered during the winter after breakfast and at 4 o'clock in the evening. I believe in regular feeding to keep continual flow of milk, also flesh; and this will keep stock in healthy condition; what cattle eat has to perform many functions. I believe to keep them perfectly healthy cannot be accomplished without mixed food.

Cows, where fed high, should have their feed lessened three weeks before calving. Fat cows are more liable to calf or puerperal fever.

The manner of milking cows is one so highly important to the owner of cows, more so possibly than they imagine. A slow, careless milker will dry up the best milker.

There is much slight in being the best milker and having the proper grip and milking regularly as the milk flows down into the teat, without too much jerking and not allowing the teat to get too full between the grip of the teat. I think the occupation belongs to the dairy maid alone.

Cows should never be driven long distance to pasture, if you expect a good flow of milk.

In feeding calves, the work is generally done by the women of the farm, who thoroughly understand all about the milk and should be very careful to never give them sour milk, as it will give them the scours, especially in warm weather.

Diseases of Cattle.

Cattle diseases are, in many particulars, similar to those of the horse. Still there are many diseases effecting cattle, in which we fail to find a counterpart in any disease attacking horses. Among such diseases, we may mention those of rinderpest, murrain and black leg.

It must be remembered by every person who undertakes to give medicine to cattle, that they have four stomaches. For this reason, cattle should, under every condition, be treated with medicine in a *fluid* form *only*, so that it may pass from one stomach to another without injury and in the shortest possible time. By giving medicine in the form of a *solid*, in place of its finding its way into any of the stomachs, it is more likely to break through the floor of the gullet, thus not only losing the medicine, but at times destroying the animal.

In cases of abscess, tumors, sores or ulcers in cattle and where the description and treatment is not full enough or not given at all, the reader is requested to turn to the diseases of the horse, in

the preceding part of this work, where he will find ample information upon the subjects.

In my remarks upon the diseases of cattle, I will only speak of those that may come in every day occurrence and may be treated by the former or unprofessional if they will pay close attention to what they find in this little manuel.

One of the commonest of diseases, but most important I will speak of first, that of milk fever.

Milk Fever.

This disease rarely occurs until the animal has attained mature age. There are few diseases that the farmer dread more than this, the first symptoms of which show in from one to six days after parturition and is shown by a weakness and finally loss of power in the hinder parts.

Cows that are in high condition are more subject to this fever than thin, bony cows, and those calving in the summer season are more liable to the fever than those calving in winter or cold weather. If we find that our cows before calving are fat and bowels light, we should give them a pound of epsom salt and keep their bowels open a week or more before calving and for six or eight days thereafter, with warm slops after calving.

In the treatment of this fever, do not delay. One ounce of pure opium in powder; tincture of aconite root, 30 drops; spirits of nitre, 1 ounce; 1 pt. corn meal, mix all with warm water into a thin gruel and give in one dose. Keep the head wet with cold water or ice cracked and put in a bag, give the aconite 30 drops every four hours,

until six doses have been given. If constipated, give one pound of epsom salts, half tea cup of molasses; ginger, one ounce.

Give plenty of cold water, plenty of air, and do not allow her to remain too long on one side without turning. Use external mustard, half pound, mix with aqua ammonia and water, equal parts, rubbing it well into the hair along the back and loins, then cover with newspaper, sticking the paper on to the mustard, taking care to keep the cow quiet and by herself, and she will get well. In the treatment here given I have been most successful.

Colic and Bloating.

Colic is caused by the animal having eaten large quantities of young grass or clover, turnips or cabbage, which by fermentation generates gas, which greatly disturbs the haunch and left side of the belly, causing great pain to the animal, and frequently threatening suffocation.

If the cow is very heavily bloated when discovered, at once use your trocar in the left side midway between the last rib and the point of the hip bone, about twelve inches from the center of the back or loins. In case you have not a trocar, which I advise all farmers to keep, then use the knife.

In case you do not have to use instrument, and can give medicine, then give half oz. cloride of lime; one oz. labelia; half oz. mustard; put in enough water that it may be administered. If the animal is subject to colic, then give my horse and cattle powders.

Diarrhoea and Dysentery.

Cattle are frequently subject to this disease, particularly in the spring when the grass is young and soft. Calves are especially subject to this disease, and it often proves fatal to them. So long as the calf is lively and feeds well, the farmer need feel no alarm for him.

The symptoms are too well known to require any description. In the early stages of this disease where a gruel of flour and prepared chalk mixed will not answer, then use the following powder twice a day, night and morning: Pulverized catechu, opium and jamaica ginger, of each half an ounce; prepared chalk, one ounce; mix and divide into twelve powders.

In case it should run into dysentery, give of calomel, powdered opium and gum camphor, of each one drachm three times daily; or give one drachm of the extract of belladonna three times a day, dissolved in water. Dysentery can be told by the bloody discharge and inflammation.

Rabies.

In case any animal afflicted with hydrophobia should get among the herd of cattle, the only thing to do is to at once open the wound with a knife, and then cauterize the wound with lunar caustic, caustic potash, or the per-manganate of potash, taking special care that every scratch made by the infuriated animal be carefully treated.

Lice.

Cattle are very subject to lice, when they are neglected and half starved, and become poor and rough haired, for lice do not feel at home on the skin of a sleek-haired, well-fed cow. From being lousy to becoming mangy is but one single step. Take the cow and wash her with the following wash, using a horse brush: Make a strong decoction of tobacco water. Stems from a cigar factory may be used; then to one quart of the tobacco water add one ounce of white hellebore; three ounces of sulphur flower; mix all well together; wash one side of the cow and if she

does not get sick, then wash the cow all over; but if she should get sick, then wait until the next day. One or two applications are generally all that will be required. I would recommend my condition powders to be given night and morning.

Calving.

On the subject of calving in its different stages, I would refer my reader to the article on mares foaling in the preceding pages, as the treatment is similar. I would remind you that you should be very careful and not allow the cow to eat her net, which is a violation of nature. Mares being cleaner will never eat their net. Cows frequently, by not being well salted, will cause them first to lick the calf, and next to eat the net. Give, after calving, epsom salts, one pound; ginger, two ounces; aconite, fifteen drops.

Cow Itch.

When the feet become sore between the toes, and ankles swell, keep in the dry and use corrosive liniment night and morning for four days. Sure cure.

Teats.

Teats of milk cows give a great deal of trouble. Certain stoppages preventing the flow of milk

through its channel. One of the obstructions which you can feel resembles a hard pebble. Use, if possible, a milk syphon. In case you have not the instrument, then use a knitting needle, not having it too sharp on the end. Push gently through the obstruction. This may have to be done from ten to fourteen days, going through the operation three times a day, till nature has once more erased its obstruction.

Warts are also troublesome on the teats and yet so simple to get rid of. Simply take a pair of sharp scissors and cut them out. Be sure you cut the button off the wart, which you can tell by feeling before you cut. Then heal with zinc ointment.

Cracked or Sore Teats.

Grease well with zinc ointment after milking.

To Dry a Cow's Bags.

Take 4 oz. of hog's lard; 3 oz. of gum camphor; put on the stove until the comphor has melted in the lard. Then grease twice a day. This is also good for mares, and sows losing their pigs.

Diseased Teeth.

In many cases cattle suffer and lose flesh, and sometimes cause eruptions under the jaw. In

all such cases extract teeth, and if eruption continues, inject from the outside or use a little mop. Apply corrosive liniment for a few days.

Pleuro-Pneumonia.

This being one of the diseases so dreaded by farmers and cattle owners, so contagious in its character, and so easily communicated from one animal to another in their feeding places, troughs, and so forth, it even being communicated through the medium of the air, the symptoms are hardly patent to the eye at first, and indeed can fool the most skeptical. Cattle will fatten well and look well when driven to the slaughter house, models of health, but to the surprise of the butcher, when opened only half of the lungs are found performing the functions of respiration. When the animal commences to lose appetite, dry cough, producing pain when he coughs, causing him to cough easy and dry, and seems to get sore over the loins, so much so if you press upon the loins, he will stoop in the back as though in great pain and will sometimes groan. When such is the case you cannot be deceived in the disease.

I do not say that every cow that has a cough

has the pleuro-pneumonia, but I would advise as a means of precaution, that for the sake of safety, the cow be taken from the rest and placed at some distance from the herd, that good disinfectants be used around her, that she be well cared for in a good, warm shed, if you have to build one, and thatch it thick with straw to make it warm and dry. Allow plenty of pure air, cold water and good, strong feed, but not too much at a time. This will be better than thin, poor and non-strengthening slop, which is so injurious and deceptive, and so often adopted in cases of sickness. When you first notice the cough and loss of appetite, give the following powders: Tincture of aconite root, 3 drachms; powdered gentian root, 3 ounces; powdered ginger root, 3 ounces; sulphate of iron, 2 ounces; sulphite of soda, 2½ ounces; mix well together, and divide into five powders. Give a powder every 4 hours, from 6 o'clock in the morning until 10 o'clock at night. Give the powder in a bottle of water sweetened with honey, brown sugar or syrup. In the next day's powders and thereafter use the same mixture, leaving out the tincture of aconite and give them but *three* times a day, instead of every four hours.

After having her in the pen and having ascertained that she had the pleuro-pneumonia, I would recommend that she be killed, for she may be as you think, perfectly cured, and still have

enough of the disease lingering in her to start the entire herd. So, I say finally, give her a dose of cold lead and bury her *deep*.

Choking of Cattle.

Choking of cattle often occurs on apples, potatoes and turnips in the gullet. By running the hand along the throat down the neck, they are sometimes removed. If not removed by this use the probang, running it down the cow's throat, pushing the substance into the stomach. If you have not the probang, use the butt end of a whale-bone whip, ascertaining first there are no rough edges on the whip.

Rupture in Calves.

Rupture in calves occurs both at birth and afterwards and may be easily cured by pushing the bowels up in the belly. Then take up the loose skin, tie a waxed end close up to the stomach to keep the cord from slipping off. Stick a large darning needle through the bunch close up to the cord and let it remain in a few days. The lump will fall off and leave a healthy sore without any rupture. I would keep the calf from others, so that it would not be bothered or worried.

Wolf in the Tail.

This has been one of the diseases that has caused much comment. Also hollow horn. I do not believe in hollow horn nor do I understand this wolf business, but I am sure that if the cow has fever we need no better guide than the horn. When we find the cow has little use of her tail and swollen down near the end, if we cut the tail where we find it soft we find a peculiar, watery substance with a gangrene smell, which readily runs out. If this fluid is allowed to remain, I believe the cow would lose part of her tail, if not all of it.

I accept this part and use the knife at once and soon the horns get to their proper temperature and all fever abates, showing that the tail or spine and horns are in sympathy with one another. Cut the slit lengthwise with the tail three or four inches long, being careful the knife does not touch the bone.

Milch cows are most valuable. We will now show figures and look into the case. The ration that makes a pound of beef when fed to a steer

would, if fed to a good cow, give us twice or more the food value, and that of a much bigger commercial value. His explanation is this: To fatten a steer he must have a ration as large as the cow in full thirty pound flow of milk. The steer in a year will gain five hundred pounds if well looked after; the actual food of this five hundred pounds approximates 125 pounds of protein and fats.

The cow in 365 days gives 5,000 pounds of milk with 350 pounds of protein and fat and 200 pounds of milk sugar. The fat produced by the steer as tallow sells for 3½ cents, and the fat produced by the cow (butter) sells for 25 cents. The proteins of meat sell for about the same as the proteins in the form of cheese.

Growth of the Creamery System.

It is probable that fully one-half pound more butter is recovered from each hundred pounds of milk under the creamery system than can be made by a private dairy as usually managed. Allowing that each cow produced 5,000 pounds of milk per year, which is about the average, there would be an increase of twenty-five pounds of butter for each cow per annum to the credit of the factory system. It is not difficult to believe that this increase is easily absorbed by the market because of the improved quality of the butter. If there is any drop in the price of butter it will not do to ascribe it to the creamery system until we have taken into account the enormous output of the butterine factories.

A careful review of the subject will reveal these two interesting phases: First, the market demands for the most part a high grade product, is willing to pay for it and can absorb an enormous quantity without materially affecting the prices. This enormous demand for good butter has been met by the creamery in a very satisfactory way.

In the second place, it is surprising to see the prices stand as well as they do when such a large amount of imitation butter is brought on the market and placed beside the product of private dairies and the enormous output of the creameries.

In thus speaking of private dairies we do not have in mind the scattered few that turn out that exceptionally fine product that goes direct to consumers. These centers of choice production are legitimate and should be encouraged; they will probably never be supplanted. The average farm butter is the kind that suffers, and between the creameries on the one hand and butterine on the other it is having a hard time of it.

The great lesson in all this is that the average consumer desires good butter and is willing to pay a fair price for it. With the better average product comes a greater consumption, and consequently steadiness of fair prices.

Hogs.

I shall not close without saying something about hogs. We are lost without a good smokehouse full of bacon. I have had many sick hogs and show testimonials from those who have had my services to bear me out.

The hog can live in almost any climate; they enjoy warm countries; there are large quantities in East Indies. They enjoy woods and farms and root for nuts, worms and young roots. The hog is spoken of in all histories and goes back 1400 years B. C. Romans made raising of hogs a study, in which they are said to be most successful. The Jews, Egyptians and the Mohammedans appear to dislike the flesh of the hog. It seems Moses laid the law down for the Jews. I have never read what time they were taken from the wild state.

What a notion that the hog is a stupid and selfish animal, and a dirty and disgusting one to be with and watch his ways. They have plenty of temper and when not much about are very shy of man. When they run in large herds they

seem agreeable to each other and huddle together to keep warm. Nothing is more dangerous and more careful than the sow with her pigs.

Hogs can be taught much by feeding and will soon learn your call and follow you. He, like us, is fond of a good bed; a sow before she has pigs will carry straw and leaves and make a nice bed, as good as though she had hands. They seem to know when the weather is going to make a change.

Hogs only live to eat and they are not dainty. When in pens will eat almost anything given them. They are very much neglected and abused by dogs, many times when your fences are the cause.

The wild boar is really the daddy from whom all domesticated breeds have sprung. He is a savage looking animal and will fight to the last when in close quarters. The sow has one litter a year and they will stay together until grown. If one gets in trouble, all will come to its rescue on its cry. They are not as much for having many pigs as our domestic sow.

They are first thought to come to this country with early settlers from England. We have now many breeds, and persons greatly differ, some liking one breed and some another.

Breeds of Hogs.

The Byefield are white, with curly hair, nicely and closely made. When over a year old, say 14 months, can be made to weigh 350 lbs. net.

The Bedford was a spotted hog that matured early and made fine hogs. They seem scarce and about laid on the shelf.

The Leicester are large coarse hogs, the only beauty about them is their heads, they make a good cross on short, thick sows.

The Yorkshire is of a dirty white or yellow color, spotted with black. They are like anything but what breeders want now days. They can eat as much as two hogs and fatten slow.

The Chinese, they inhabit Eastern Islands. There are two varieties, white and black. They fatten very fast and are very oily when cooked. They make a fine cross on large breeds and are good to raise pigs to kill for table use, when three to four weeks old. They are strictly pretty, round and plump. They cross nicely with the Berkshire, and to grow very large ones cross with Chester White.

The Suffolk are white with long legs, better to cross on Chinese. You then get fine porkers of good shape that fatten good.

The Berkshire, which is the favorite of today, I shall say little of, for all are acquainted with them and they should always have a green spot in every breeder's mind.

Sow With Pig.

Feed them only enough to keep them in fair order. If in cold weather, and they show heavy with pig, keep them from other hogs as they will pile upon each other to keep warm and hurt themselves.

Feed plenty of good ground feed, middlings or cooked feed.

After they pig, never, if you can avoid it, allow them to eat the net. It will cause them after awhile to eat their pigs; and should she eat her pigs, fatten her.

Sows carry their pigs four months and have from eight to thirteen at once. Every pig has his own teat.

Should a sow have more pigs than she has teats, they will do badly.

Let every sow have a pen to herself.

If you have several sows to come in the same time, which you should have and some come dead or have accident, you can give another sow one or more, according to her teats. Get the sow out of her nest and slip the little pig in while she

is out. Let it stay with the rest half an hour or more, then she cannot smell any difference and will own it nicely.

Feeding Hogs.

Feed them three times a day at same hour, if possible. Never overfeed.

A small quantity of salt should be given. The proper way is to have a piece of rock salt convenient in the pen where the hog can lick it and get the proper quantity.

It is also well to place a lump of salt in the field, where all of the cattle, hogs and horses can lick at it during the summer, especially if the soil should not be clay.

Keep pen and trough clean.

Do not feed little and big together, for they will not do well and you will get them hurt.

Let them be in classes and have plenty of light and air.

They don't want much medicine unless you use a preventive or have any sick and should then be handled with care.

Never drench, if you can avoid it.

I saw once a very singular case. A farmer, thinking he could cure cholera, noticed his hogs' eyes red and very dull, and they had no appetite

He said to his wife, "our hogs all are sick. Get my medicine ready—soft soap, vinegar," &c. This being done, he went to work on them and killed ever so many of them when, in fact, his hogs had the common complaint which hogs have, viz. measles.

I was sent for and told him his hogs had not the cholera. I then explained the matter. We gave the hogs the old apple-butter kettle full of hot slop with sulphur, nitre and black antimony, putting the medicine first in the trough and giving each grown hog about one ounce. He did this each day for five days and everything was sound and well.

Clean and give fresh straw. A little nursing tells with hogs. By watching them, you will gain in number and profit in a year.

Some farmers will turn their sows out to run in the woods or fields to take care of themselves, while they should be housed and cared for the same as a shepherd cares for his sheep.

The sow, when with her pigs, in or about the nest, will fight for and protect them; but at times she may wander away from them, while hunting for food. At such times foxes, eagles and even large hawks will attack and carry off the pigs which is always a dead loss to the farmer.

Hog Cholera.

I here attach my cholera receipt with indorsers to the same:

Lime, slaked,	¼	pound.
Venetian red,	1	"
Sulphur,	1	"
Black antimony,	1	"
Ginger,	1	"
Salt petre,	1	"
Cayen pepper,	¼	"
Charcoal powder,	1	"

Mix the above together and give from one to two ounces a day. If hogs are large give half dose at noon. Feed small hogs accordingly. Pigs, four weeks' old, teaspoonful twice a day. You can make up any quantity you want by taking equal parts.

When taken in time, it is an invaluable medicine.

When hogs are kept in pens, give them charcoal in their pens. If you have not charcoal, use old, rotten wood, a willow stump is good.

Always prevent breaming sows from breaking

into a pen of fattening hogs, as by jumping on their backs they may become unjointed or otherwise crippled.

Affidavits.

AFFIDAVIT OF MR. CONRAD SEIBERT:

Personally appeared before me, a Notary Public for Washington Co., Md., Mr. Conrad Seibert, and made oath in due form of law that the accompanying statement is true and correct to his own personal knowledge:

In the fall of 1884 I had four hogs that had the cholera. Two could not stand up for several days. The others were not so bad. I got three packages of medicine from Doctor G. R. Hollingsworth and gave it to them. They all got well. They all improved from the time they commenced to take it and got fat and healthy. Two that had been sick when they were killed weighed 200 pounds each. They were under one year old.

CONRAD SEIBERT.

Subscribed and sworn to before me, this 14th day of December, 1885.

D. W. CROWTHER,
Notary Public.

We know the within-named Conrad Seibert,

and know him to be a man of good standing in this community.

GEO. B. OSWALD, Clk. Ct. Ct.
THOS. E. HILLIARD, Reg. of Wills,
WILLIAM T. HAMILTON,
A. K. SYESTER,
LOUIS E. MCCOMAS, Congressman.

AFFIDAVIT OF MR. FREDERICK FRANK:

Personally appeared before me, a Notary Public for Washington County, Md., Mr. Frederick Frank and made oath in due form of law that the accompanying statement is true and correct to his own personal knowledge:

In the fall of 1884 I had nine hogs in the pen. When I sent for Dr. G. R. Hollingsworth, one of them was nearly dead. I had given it up. It could not stand and could hardly make any noise. I gave it some of the medicine and it recovered. The others were sick and had the scours. I give it to them and they all recovered and did well, and sold them all except three, which I killed.

This season, (1885,) I had to use the same medicine again. Three hogs were sick. It cured them and they are getting fat. They can be seen at my house until March.

FREDERICK FRANK.

Subscribed and sworn to before me this 12th

day of December, 1885. D. W. Crowther,
Notary Public.

We know Frederick Frank and know him to be a man of good standing in the community.

Geo. B. Oswald, Clk. Ct. Ct.,
Thos. E. Hilliard, Reg. of Wills,
A. K. Syester,
Louis E. McComas.

Affidavit of John and John C. Miller, of Leitersburg District.

Personally appeared before me, a Notary Public for Washington Co., Md., and made oath in due form of law that the statement made below is true and correct to their own personal knowledge:

In the fall of 1884, we had about twenty head of hogs in the pens. Several of the hogs became sick and had spasms when they commenced to eat. One laid down or only raised on his front legs for about two weeks. The rest of the hogs in the same pens had no signs of the disease and fattened well. Those that were sick recovered and did better than before.

We only lost one hog out of about twenty head and he had been sick for a week before we used the medicine we got from Dr. G. R. Hollingsworth, and could not eat. We have used this remedy for two seasons, and we have had no disease this fall.

John Miller,
John C. Miller.

Subscribed and affirmed to before me, this 15th day of December, 1885. D. W. CROWTHER.

We know John Miller and John C. Miller and know them to be men of good standing in the community.

GEO. B. OSWALD, Clk. Ct. Ct.,
THOS. E. HILLIARD, Reg. of Wills,
LOUIS E. MCCOMAS, Congressman.

I know John Miller and John C. Miller. They are gentlemen of good standing in the community and in every respect entitled to credit.

WILLIAM T. HAMILTON,
A. K. SYESTER.

Guide to Owner and Tenant.

As I have said, "a stitch in time saves nine." It is a true saying and I again put the reader to look after things closely, or jog his tenant.

The first requirement of successful stock growing is care. Without it good blood or good feed or good natural conditions will lose nearly all their value, and all combined can scarcely bring a profit.

Care cannot take the place of good blood or good food or favorable natural conditions, but it can do more alone than any of them, and with them as its materials it will produce the most gratifying results.

It is the man who sees to it that no one of his animals lacks good food, good drink, good shelter or good blood that makes the striking success of stock raising.

His calves are not still-born, his lambs are not disowned, his colts have not weak ankle joints, his pigs are not farrowed with cholera for a mate, his dams do not have difficulty in giving birth,

his animals are not hurt or killed by accident, he does not allow lambs to be frozen the night they are dropped, or the calf to stray off and die, or the litter to be drowned in its nest.

He makes money out of stock raising, and he gives care at all seasons.

Tincture Aconite Root.

Every man who keeps a horse should keep a vial of this poison drug in some safe place where he can put his hand on it at any time. You will save many a horse if used in time.

Ask the druggist to give you a little eye dropper or a small vial holding sixty drops, and give for a dose from twenty-five to thirty drops for chill. There are so many things it is good for, that you will not go wrong to give a dose, whenever you see your horse droopy. Do not follow giving it too fast—every three or four hours, and then according to the size and age of the animal. After giving several doses and no better and you are not able to diagnose the case, take advice. Very often you will strike the nail straight.

Give them one dose for a day or so for colds and let the animal have little rest during that time until he commences to feed well and look full and bright.

Sulphur.

Sulphur should be bought in large quantities where much stock is kept.

Sulphur as a horse medicine has peculiar and valuable properties.

It is alterative, mildly cathartic and disinfectant.

It destroys putridity of the bowels quicker than any other medicine and acts very finely upon the absorbents.

It is somewhat sedative and most certainly diuretic. But it is most valuable in its action upon the skin and hair.

It opens the pores and stimulates the oily secretions to press to the surface.

It may be given in any quantity without injury to the horse. The usual dose is two ounces every day or four ounces every other day. A teaspoonful of salt petre may be added.

Corrosive Liniment, External Use Only.

There is nothing that takes the place of this liniment.

I believe it to be the best in the whole world.

Take a pint of turpentine, which put in a good, strong bottle, adding an ounce of finely-pulverized corrosive sublimate and an ounce of gum camphor. Shake well and let the mixture stand for twenty-four hours, when it will be fit for use.

The value of this liniment depends greatly upon the fineness to which the corrosive sublimate is pulverized. Grind it as fine as possible in a druggist's mortar; pounding with a hammer will not answer.

The object of this pulverization is to get the substance in such a form that it will be readily dissolved by the turpentine.

There are comparatively few liquids which will dissolve corrosive sublimate. Turpentine is one of these.

Corrosive sublimate is one of the most violent

poisons. Its combination with turpentine constitutes one of the most powerful of medicines, increasing in its active properties by keeping.

I believe it to be the most penetrating and healing liniment. It reaches the seat of disease through any and all obstacles. It destroys all infection, putridity, ulceration, old running sores, proud flesh and all skin and bone diseases of the horse.

It will cure big head and jaw, grease, thrush, scratches, swelled legs, hoofrot, foot evil, corns, ulceration of the foot, (navicular disease,) fistula, poll-evil, ring-bone and spavin in their first stages.

Always shake the bottle well before taking out the stopper. Pour the liquid into an earthen vessel, as it corrodes vessels of metal. Apply with a little mop of soft rag.

On all bone affection the liniment is to be thoroughly dried in by means of a hot iron held close to the medicated spot, but not close enough to burn the animal.

Particular directions are given in connection with the description of diseases how to proceed in reference to quantity and manner of using the liniment.

While it penetrates the skin of the horse, it will make him jump around for about ten or fifteen minutes.

It will not harm the hands of man. Always lable the bottle well, that it may not be mistaken for something else and taken internally.

Magic Nerve Liniment.

Get a strong bottle capable of holding eight ounces, into which put

Spirits of hartshorn, ...	1½	ounces.
Sulphuric ether,.....	1½	"
Spirits of turpentine,.....	½	"
Sweet oil,.....	¾	"
Oil of cloves, ...	½	"
Chloroform, ...	1	"

Shake well and your liniment is ready for use. The bottle should be well closed, with a ground glass stopper, if possible, as several of the ingredients of the mixture are highly volatile.

It should be kept in a dark place or else closely wrapped in thick paper or cloth, as light tends to destroy its power.

This liniment, as its name implies, is applied for nervous affections and is very soothing in its effects. It allays the pain in cases of string halt, cramps, contraction of the skin, sprains, swelled legs and joints.

It is used as a counter-irritant to rub over the region of the throat in colds, coughs, swelled throat, etc.; the lungs in bronchitis, pneumonia and pleurisy; the stomach and bowels in colic

and enteritis; the back and loins in all affections of the kidneys and urinary organs.

It is also excellent to apply to the region of the brain, in all cerebral disturbances.

If applied early enough it will cure tumors and other swellings.

Persons with rheumatism can spend many a night with pleasant sleep by rubbing parts effected. For sick headache or toothache, bathe temples, forehead, sides of the neck.

Liniment for Bruises.

Alcohol,	1 pint.
Castile soap,	4 ounces.
Gum camphor,	¼ "
Sal ammoniac,	¼ "

When these are dissolved add

Laudanum,	1 "
Origanum,	1 "
Oil of sassafras,	½ "
Spirits of hartshorn,	2 "

Bathe freely. This is fine liniment and should be kept on hand all the time.

Lime Liniment.

Lime water and linseed oil, 1 pint each, are excellent for burns of any kind. Two ounces of laudanum may be used, also, and should be kept by every one on a farm.

It is so excellent for man and beast; take

cotton bat, soak well and apply and repeat when the cotton or cloth gets dry; shake well when you first mix, also before using.

Good Home Liniment.

Strong apple vinegar,..... 1 pint.
White of hens' eggs,..... 5
Spirits of turpentine,..... ½ "

Put in strong bottle; shake well before using; good for strains, scratches and bruises; will kill the poison of St. John's weed.

Liniment for Man and Beast.

Oil origanum,..... 1 ounce.
Oil senega,..... 1 "
Spirits of turpentine,..... 4 "

Mix; apply twice a day, rubbing in well.

Stimulating Liniments.

Sweet oil, - - - - 2 ounces.
Spirits hartshorn, - - 1 "
Spirits turpentine, - - - ½ "

Mix.

No. 2---For Splints.

Oil origanum, - - - 1 ounce.
Alcohol, - - - - ½ "
Turpentine, - - - ½ "

Mix.

For Callous Swellings After Bruises.

Soap liniment, - - - 4 ounces.
Camphor, - - - ¼ "
Aq. ammonia, - - - 1 "
Mix.

For Strains.

Barbadoes Tar, - - - 2 ounces.
Spirits Turpentine, - - 2 "
Soap Liniment, - - - 4 "
Mix.

Good Liniment for Cuts and Bruises.

Laudanum, - - - - 1 ounce.
Tr. arnica, - - - - 1 "
Spirits turpentine, - - - 1 "
Oil tar, - - - - 1 "
Sweet oil to make - - - 8 "
Apply when necessary.

Liniment for Blistering.

Aq. ammonia, - - - 1 ounce.
Spirits turpentine, - - - 1 "
Oil origanum, - - - 1 "

Tr. cantharides, - - - 2 "
Soap liniment to make - 8 "
Apply with a hot iron once or twice a day.

Liniment for General Use.

Aq. ammonia, - - - 1 ounce.
Spirits turpentine, - - - ½ "
Oil origanum, - - - 1 "
Sweet oil, - - - 6½ "
Use once or twice a day.

Nerve and Bone Liniment.

For reducing swellings produced by kicks, &c:
Aq. ammonia, - - - 1 ounce.
Tr. capsici, - - - - 1 "
Oil origanum, - - - 1 "
Oil sassafras, - - - - 1 "
Tr. Cantharides, - - - 1 "
Sweet oil to make - - - 8 "
Apply twice a day with brisk rubbing.

Eye Wash.

Swelled lids, bruise or injury of any kind, take three hen's eggs and break them into a quart of clear cold rain water. Stir until a thorough mixture is effected. Boil over a slow fire, stirring every few minutes. Add half an ounce of sulphate of zinc (white vitriol), continue the boiling a short time and the compound is ready for use.

Strain through a fine sieve, then apply with a soft linen cloth covering the eye. Then take a piece of cotton bat and put over the cloth, and then tie both to the eye with a piece of muslin. Cut the muslin large enough to put the horse's ears through it, letting a piece come back of the ears 4 inches. Then put on the halter, and fasten the end under the neck.

If only one eye effected, cut a hole in the muslin for the good eye, now bathe well with the eye wash, several times a day, until the inflammation has subsided. This I greatly recommend.

Cure for Heaves.

Oil of tar, teaspoonful night and morning, the same is also good for coughs.

Licorice powder and salt petre also good for cough, using double the quantity of powder.

Fever Balls.

Emetic tartar, - - -	½ ounce.
Camphor, - - - -	½ "
Nitre, - - - - -	2 "

Mix with linseed meal and molasses to make 8 balls, and give one twice a day.

Physic Balls.

Aloes, - - - -	2 ounces.
Turpentine, - - - -	1 "

Flour, - - - - - 1 "

Make into a paste with a few drops of water; wrap in a paper and give with a bailing iron.

Worm Balls.

Asafoetida, - - - 4 ounces.
Gentian, - - - - - 2 "
Strong mercurial ointment, 1 "

Make into mass with honey, divide into 16 balls. Give 1 or more every morning.

Liquid Blister.

Linseed oil, - - - - - ½ pint.
Spirits turpentine, - - 1 "
Aqua ammonia, - - - 4 ounces.

Shake well and it is fit for use. Apply every third hour, until it blisters.

Cataract.

This can be removed from a horse's eye with finely-pulverized burnt alum, blown into the horse's eye with a goose quill.

Or take oil of wintergreen; get a small glass syringe and inject a few drops into the eye, and after three days repeat the application.

Wounds.

One of the best washes for ordinary wounds on horses that is known is to take ¼ lb. of saltpetre,

½ a pint of turpentine and put them into a bottle, shake well before using; apply to the wound three times a day with a feather.

Cure for Founder.

Clean out the bottom of the hoof thoroughly—hold up the leg so as to bring the bottom of the hoof upwards, holding it firmly in a horizontal position and pour in about a tablespoonful of turpentine, if the cavity of the hoof will hold that much—if not, pour in what it will hold without danger of running over, touch the turpentine with a red-hot iron, (that will set it on fire;) hold the hoof firmly in position until it burns out.

Great care must be taken that it does not run over on the hair of the hoof, lest the skin be burned. If the feet are all affected, burn all of them. Relief will speedily follow, and the animal will be ready for service in a short time.

If you have on hand corrosive liniment, use that instead of turpentine. Keep horse's feet stuffed with good poultice flax seed, made with the oil not extracted. Feed mash feed.

Horse and Cattle Powders.

Ginger, black antimony, sulphur, saltpetre, charcoal powder, hickory ashes.

Take equal parts of the above and mix together.

Will be just what you have been looking for for years. It will aid and strengthen and cleanse the entire system. Can be fed to all kinds of stock and a small quantity to chickens and turkeys is excellent, in corn meal dough. Doses for horse, one tablespoonful morning and night.

In any case where it requires, you may give three times a day. Colts under one year, teaspoonful, giving in chop feed or bran and oats mixed.

Maggots from Flyblow.

Apply corrosive liniment. Will extract maggots and make healthy sores, using liniment for several days.

Ointment for Saddle Galls and Open Sores.

Oxide zinc, - - - ½ ounce.
Lard, - - - - 2 "

Mix well together and apply once a day after washing the parts with soap and warm water. Use castile soap.

Ointment for Saddle Galls.

Calomel, - - - ¼ ounce.
Cosmoline, - - - 1 "

Mix. Apply once a day.

Blistering Ointment.

Red iodide mercury, - - ¼ ounce.
Oint. Spanish fly, - - ½ "
Lard, - - - - - 1 "

Mix. Apply once a day.

This is a good blister for remedying bone spavin and all callous growths.

Ointment for Cuts, &c.

Carbolic acid, - - ¼ ounce.
Cosmoline, - - - 1 "

Mix. Apply once a day.

Ointment for Scratches.

Blue stone (fine powder,) - ¼ ounce.
Lard, - - - - - - 1 "

Wash the parts with warm water and apply once a day.

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